IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AGILENT TECHNOLOGIES, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 23-198 (CJB)
	)	
AXION BIOSYSTEMS, INC.,	)	
	)	
Defendant.	)	

JOINT CLAIM CONSTRUCTION BRIEF

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TABLE OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION	DOCKET/ EXHIBIT NO.
Pl. Br.	Plaintiff's Opening Claim Construction Brief	
Ax. Br.	Axion's Answering Claim Construction Brief	
Reply	Plaintiff's Reply Claim Construction Brief	
POSITA	Person of ordinary skill in the art	
JCCC	Amended Joint Claim Construction Chart	D.I. 90
'752	U.S. Patent No. 7,192,752	D.I. 82-1 ("Ex. 1")[1]
'080	U.S. Patent No. 8,026,080	D.I. 82-2 ("Ex. 2")
'255	U.S. Patent No. 7,468,255	D.I. 82-3 ("Ex. 3")
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[1] Copies of the patents-in-suit, as well as other portions of the intrinsic evidence relied upon by the parties, were attached as Exhibits 1-19 to the parties' Joint Appendix of Exhibits to Joint Claim Construction Chart (D.I. 82). For ease of reference, the parties have included copies of Exhibits 1-19 (along with Exhibits 20-28) as part of the omnibus Joint Appendix filed herewith.

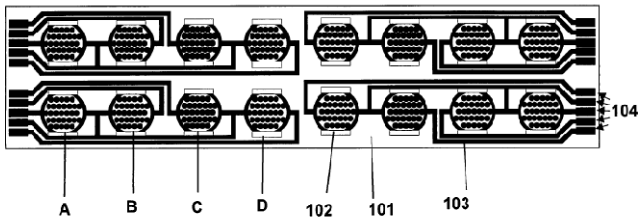
I. BACKGROUND OF THE ASSERTED PATENTS[2]

A. Plaintiff's Opening Brief

Agilent is a leader in the market for systems that measure and analyze the impedance of cells placed in wells of a multi-well plate to improve researchers' ability to analyze cell behavior in real-time. Agilent invests substantial resources in developing this and related technology.

Traditional methods of analyzing cell death or cell growth ("end-point assays") present logistical and scientific hurdles that limit the ability to study the toxicity of a compound to cells over time because they require a separate experiment to be performed at each time a measurement is desired and result in cell death. Ex. 1 ('752 Patent), 3:24-42[3]; Ex. 3 ('255 Patent), 3:50-4:10.

The Asserted Patents claim novel methods for real-time, high-throughput impedance-based cell analysis that overcome the hurdles of the prior art. The invention "detects cells and/or molecules through measurement of impedance changes resulting from the attachment or binding of cells and/or molecules to the electrode surfaces." Ex. 1, 1:52-55; Ex. 3, 2:38-41. By accurately measuring the impedance of cells, scientists are able to draw conclusions about whether they are alive. The clamed methods utilize a multi-well device, such that each well has its own electrode array on the bottom surface:



See, e.g., Ex. 1, FIG. 1A (depicting a substrate (101) of 16-well device with 16 electrode arrays

[2] U.S. Patent Nos. 7,192,752 ("the '752 Patent"), 7,468,255 ("the '255 Patent"), and 8,026,080 ("the '080 Patent").

[3] The specification of the '080 Patent is substantively identical to the specification of the '752 Patent. The intrinsic support in the '080 Patent is incorporated by reference by citations to corresponding intrinsic support in the '752 Patent, as agreed by the parties.

(102)); Ex. 3, FIG. 1A (same). Cell samples can be placed on the electrode arrays on the bottom surfaces of one or more of the wells and attach to the bottom surface containing the electrodes of the respective electrode arrays. *See, e.g.*, Ex. 1, 23:10-20; Ex. 3, 29:40-49. A measuring voltage can be applied independently to the electrode array in any of the wells, and, while that voltage is applied, the system can take a measurement across the electrode array. *Id.* Changes in impedance reflect changes in cell behavior such as cell death or growth. *Id.* The system includes not only the multiple well device(s), but also components such as a software program that facilitates the use of the device and analysis of the recorded impedance values. Ex. 1, 24:3-12; Ex. 3, 30:32-55. The system can calculate a "cell index" based upon the impedance measurements.

Because measuring impedance does not harm cells, impedance can be monitored continuously over the time course of an experiment. By way of example, the '752 and '080 Patents claim monitoring cell-substrate impedance in response to one or more test compounds by introducing cells to wells of the system, adding one or more test compounds to the wells, and monitoring the cell-substrate impedance before and after adding the test compound(s). Ex. 1, Claim 14, 8:12-19, 47:27-61, FIG 10; Ex. 2 ('080 Patent), Claim 1. The '255 Patent claims another application of real-time cell analysis—measuring the cytolytic activity of cytotoxic effector cells (such as immune cells) against target cells (such as cancer cells by) introducing target cells to the wells of the system, adding effector cells to the wells with target cells, and monitoring the impedance before and after adding the effector cells. Ex. 3, Claim 9; *see also* Ex. 3, FIG. 26C, 13:64-14:30, 89:56-90:14.

B. Defendant's Answering Brief

Plaintiff accuses Axion of infringing 41 claims in three patents that Plaintiff acquired in 2018. The patents are old, and Plaintiff is overreaching in trying to read them onto Axion's products. Two of the patents are expired, and the third expires in May 2024. Moreover, there are

a few claim limitations in these patents that are so unclear that skilled persons would be unable to reasonably ascertain their scope—rendering such claims invalid as indefinite under the legal standard for indefiniteness clarified by the Supreme Court in 2014 (years after the patents issued).

The parties identified nine term sets for briefing during their claim construction exchanges. (*See* D.I. 90 (JCCC).) Plaintiff identified Terms 1-3 and 5 for construction. For Terms 1-3, Plaintiff attempts to read limitations into the claim from the specification, even though the claim language in these terms is fairly straightforward. Axion's proposed constructions for Terms 1-3, as well as Term 5, focus the parties' disputes about the scope of these claim terms.

Term 4 appears in all asserted claims of the '752 and '080 patents, and both parties identified it for construction. Axion's construction comes directly from the specification's own words as to what "each [electrode] array of a device is individually addressed" means (*see* '752 at 16:23-29), whereas Plaintiff relies more heavily on its interpretation of a portion of file history in a later, continuation-in-part of the '752 patent. The specification is the better guide here. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*en banc*).

Terms 6-8, as Axion will show, are indefinite; these limitations fail to inform, with reasonable certainty, skilled artisans about their scope and do not comport with the definiteness requirement's public-notice function. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901, 911 (2014). And finally, Term 9 presents an unusual case where the patentee explicitly stated in the claim that a method step was "optional." Plaintiff nevertheless disputes whether the patentee should be held to the word it chose, and tries to rewrite Term 9 to give it new meaning.

Axion respectfully requests that the Court construe the disputed terms as set forth below.

II. AGREED-UPON CONSTRUCTIONS

Claim Term/Phrase Patent/Claim	Proposed Agreed Construction and Intrinsic Support
"effector cells" '255 Patent: claim 9	"cells capable of killing or lysing target cells" Intrinsic Support: '255 Patent: Abstract; 3:6-4:10; 14:42-53; 22:56-23:8; 23:20-25; 23:26-33; 24:17-19; 72:9-24; 72:30-34; 73:33-37; 75:6-22; 75:56-67; 77:58-66; 87:21-42; 87:59-63; 89:29-38; 99:32-102:21; FIG. 25B; FIG. 26B.

III. DISPUTED CONSTRUCTIONS

A. Term 1: "at least two of the multiple wells comprise an electrode array at the bottom of the well" ('080 Patent, claim 1) / "at least two of the multiple wells of said device comprise an electrode array at the bottom of the well" ('752 Patent, claims 11, 14)

Agilent's Proposed Construction	Axion's Proposed Construction
"each of at least two of the multiple wells [of the device] has its own distinct electrode array fabricated on the bottom surface of the well"	"each of at least two of the multiple wells includes an electrode array at the bottom of the well"

1. Plaintiff's Opening Brief

Agilent's construction clarifies that each electrode array (1) corresponds to one well, i.e., "each . . . well[] has ***its own distinct***[4] electrode array," and (2) is fabricated on the ***bottom surface*** of the well.

First, the patents do not teach or disclose any embodiments that include an electrode array that spans more than one well. In fact, that would be contrary to the invention. Instead, the specification discloses that "[t]he device is assembled such that ***a single array*** of the substrate is at the bottom of a receptacle or well." Ex. 1, 21:29-31. Figure 1B "depicts a single electrode array of a device," where "the diameter of the electrode array area" is "smaller than the bottom well

[4] All bold and italics emphasis in Plaintiff's briefing has been added unless indicated otherwise.

diameter" and Figure 1A illustrates "an example of the device of the present invention . . . . with 16 electrode arrays fabricated on the substrate," i.e., one distinct electrode array per well.

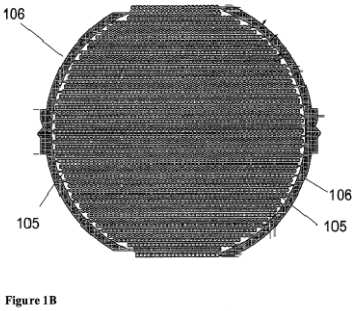
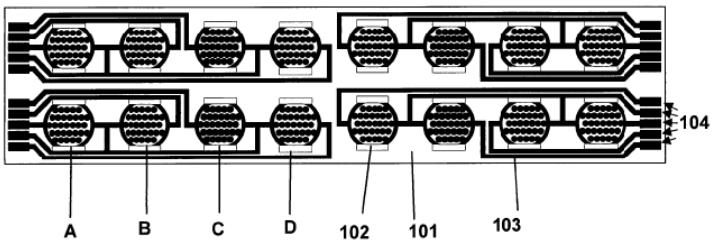


Figure 1B

Ex. 1, FIG. 1B.



Ex. 1, FIG. 1A.

See also id., 7:20-25, 18:57-60, 19:36-38. This is an important aspect, because ***distinct*** electrode arrays corresponding to each well allows for separate monitoring of multiple wells at once, i.e., in a high-throughput manner – an objective of the '752 and '080 Patents. *See, e.g.*, *id.*, 3:1-3 ("there is an urgent need for high-throughput molecular and cellular assays to screen for [therapeutics]"). The possibility of an electrode array spanning multiple wells would run contrary to this teaching, because a measurement taken with an electrode array that touches more than one well would not provide an independent reading for each well. Axion's construction merely parrots the language of the claims and fails to account for this critical aspect. *See Chanbond, LLC v. Atl. Broadband Grp., LLC*, C.A. No. 15-842-RGA, 2016 WL 7177612, at *7 (D. Del. Dec. 9, 2016) (rejecting construction that "mimic[s] the words of the claim term and adds nothing to the meaning of th[e] term").

Second, the intrinsic record discloses and supports that the electrode arrays are fabricated on the bottom ***surface*** of the well as opposed to sides of the well near the bottom (which arguably may fall within the scope of Axion's construction). *See, e.g.*, Ex. 1, 39:59-63 ("microelectrode arrays . . . fabricated onto the bottom surfaces of wells … or . . . . (wells) having ***electrodes***

fabricated on their bottom surfaces facing into the wells"), 22:16-17 ("wells comprise an electrode array ***on the bottom surface*** of the wells"), 15:55-56, 19:37-38.

2. Defendant's Answering Brief

Plaintiff seeks to construe these two similar phrases that appear in the '752 and '080 patent claims.[5] These phrases are understandable and straightforward—each well includes an electrode array at the bottom of the well—and Axion's construction reflects that. The '752 specification regularly uses the same words found in the claims to describe that an electrode array is at the bottom of the well. (*See, e.g.*, '752 at 4:15-29, 21:29-32, 22:48-61, 23:4-10.)

Plaintiff, on the other hand, seeks to narrow the meaning of the Term 1 claim phrases by reading in two limitations. First, Plaintiff's construction improperly requires that the electrode array is "fabricated on the bottom surface of the well." When the patentee wanted to limit the manner in which claimed components were fabricated, it knew how to do so, such as in claims 2 and 10 of the '255 patent that each recite "two or more electrode arrays fabricated on said substrate." ('255 at 98:47-48, 99:54-55.) But the patentee did not do that in the Term 1 claim phrases. Further, the specification does not specifically limit electrode arrays to being only those "fabricated on the bottom surface" of a well. (*See, e.g.*, '752 at 4:15-29, 21:29-32, 22:48-61, 23:4-10, 63:63-65, 67:65-67.)

Second, Plaintiff's construction requires that each well "has its own distinct" electrode array. But the claim language is not so limited, and the word "distinct" appears nowhere in the

[5] The '080 patent issued from a divisional application of the '752 patent, and the two patents share a common specification. Citations in Axion's briefs to the specifications of these two patents are to the '752 patent specification, by agreement of the parties and for ease of reference for the Court. (*See* Pl. Br. at 1 n.3.) For the Court's benefit, Axion also provides a partial family tree for the patents-in-suit that includes the related U.S. patents to which the parties also refer in their respective briefs. (*See* Ex. 20.) This exhibit omits the numerous provisional applications and other related utility applications in the family that the parties do not cite.

specification. Axion suspects that Plaintiff is attempting to add the "distinct" limitation to navigate around a particular prior art configuration of wells and electrode arrays. One such prior art device is shown in the figure reproduced below, with the device's eight square-shaped wells outlined in yellow. (*See* D.I. 82-15 at AGILE0066071 (patentee discussing prior art figure in related '127 patent file history) (color annotations added).) Each well includes (a) one circular electrode in the middle and (b) a portion of a large, rectangular electrode near one side.

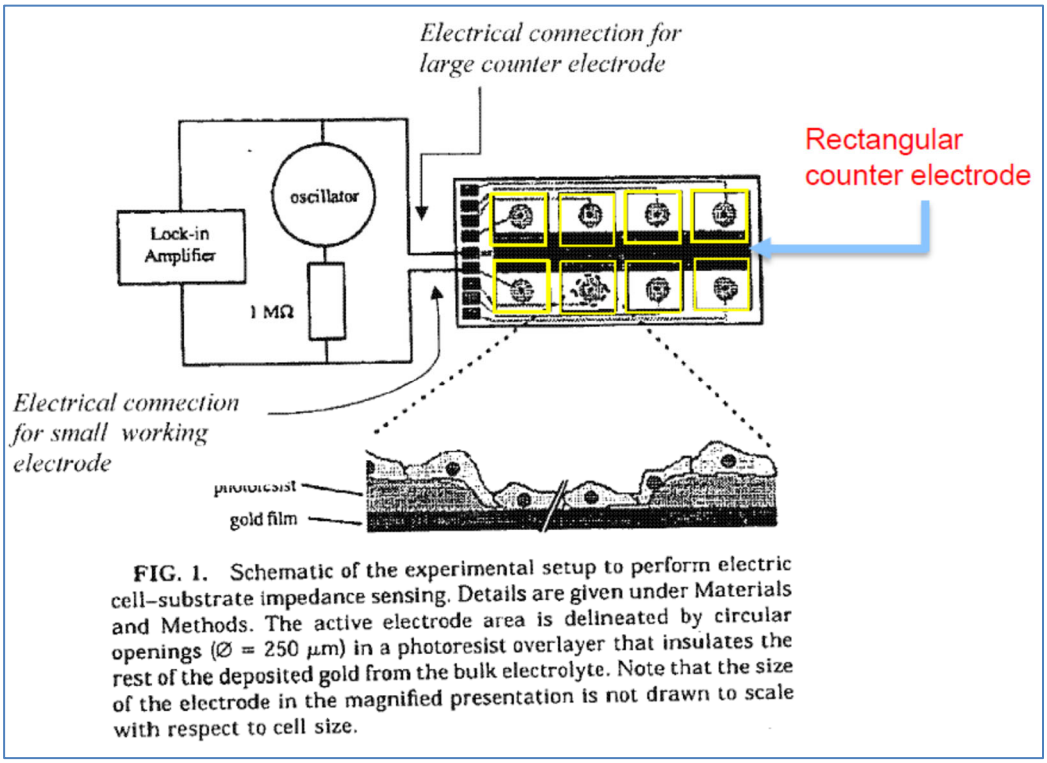


FIG. 1. Schematic of the experimental setup to perform electric cell–substrate impedance sensing. Details are given under Materials and Methods. The active electrode area is delineated by circular openings (Ø = 250 μm) in a photoresist overlayer that insulates the rest of the deposited gold from the bulk electrolyte. Note that the size of the electrode in the magnified presentation is not drawn to scale with respect to cell size.

Presumably, Plaintiff intends to use its construction for Term 1 to argue that this prior art device does not describe a well with "its own distinct electrode array" because of the shared rectangular electrode. Regardless of Plaintiff's motives, the Court should reject Plaintiff's attempt to narrow Term 1 in a manner unsupported by the claim language and specification.

3. Plaintiff's Reply Brief

The invention requires the ability to monitor cell-substrate impedance in individual wells of a multi-well plate. *See* Ax. Br. at 6-7; Ex. 1, 3:1-3. The disclosures of the '752 and '080 Patent

specification are unequivocal—each well must have its own distinct electrode array. Ex. 1, 7:20-25, 18:57-60, 19:36-38, 21:29-31, Figs. 1A, 1B. Axion fails to address the abundant intrinsic support cited in Agilent's opening brief or cite any contrary intrinsic or legal support. Rather, Axion summarily concludes that Agilent's proposed construction is "unsupported by the claim language and specification." Ax. Br. at 7.

Axion resorts to searching the specification for the word "distinct," rather than for its concept. *Id.* Courts routinely construe claims using words that are not found in the specification. *See Braintree Labs., Inc. v. Novel Labs., Inc.*, 749 F.3d 1349, 1360 (Fed. Cir. 2014) (finding district court's construction of "purgation," which included a word not used in the claims or specification, did not render the claim indefinite because a POSITA would understand the meaning of the term); *see also Belcher Pharms., LLC v. Hospira, Inc.*, No. 17-775-LPS, 2018 U.S. Dist. LEXIS 167636, at *11-12 (D. Del. Sep. 28, 2018) (construing disputed claim term to include the word "excipient," which was not in the specification or claims of the patent at issue). The goal of claim construction is not to copy and paste words from the specification, but to breathe meaning into terms that need clarification, which is precisely why Agilent has used the clarifying word "distinct."

Axion also argues Agilent is motivated to include "distinct" in the construction of Term 1 to avoid prior art. Ax. Br. at 6-7. While the Court need not entertain the merits of a prior art dispute at the claim construction stage, the Court may take into account that there is a potential dispute, which the Court should address now to avoid presentation of claim construction issues to the jury. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996).

Axion also takes issue with the "fabritact[ion] aspect of "fabricated on the bottom surface of the well" in Agilent's construction, but not with the location "on the bottom surface of the well." Ax. Br. at 6. Agilent's proposed construction is supported by the intrinsic record, *see, e.g.*, Ex. 1,

39:59-63, 22:16-17, 15:55-56, which Axion does not dispute (Ax. Br. at 6-7), but to narrow the issues, Agilent is open to removing "fabricated" from its proposed construction.

4. Defendant's Sur-Reply Brief

Plaintiff concedes that it is trying to narrow the meaning of Terms 1-3 to the disclosed embodiment, including to avoid prior art. (Reply at 7-9, 11, and 16-17.) Plaintiff asserts that "[t]he goal of claim construction is … to breathe meaning into terms that need clarification …." (Reply at 8.) But it is well established that "[c]ourts do not rewrite claims; instead, we give effect to the terms chosen by the patentee." *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999). While the specifications' only disclosed embodiment includes one electrode array at the bottom of each well, that, by itself, is no basis to read the word "distinct" into the claim. *See, e.g.*, *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) ("[T]his court has expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.") (citation omitted).

In any event, Plaintiff now allows that the "fabricated" language in its construction is unnecessary. (Reply at 8-9.) The same is true for the "distinct" and "bottom surface" additions in Plaintiff's construction. The Court should adopt Axion's construction for Term 1.

B. Term 2: "each of said two or more arrays is associated with one of said two or more wells" ('255 Patent, claim 10)

Agilent's Proposed Construction	Axion's Proposed Construction
"each of said two or more arrays is associated with only one distinct well"	"each of said two or more arrays is associated with a well"

1. Plaintiff's Opening Brief

As with Term 1 in the '080 and '752 Patents, the dispute here with respect to the '255 Patent stems from Axion's improper attempt to broaden the scope of the claims by changing the claim's clear use of "one" (meaning only one) to "a" (meaning that it is not limited to one) to try

to encompass a device in which an electrode array "is associated with," i.e., spans more than one well—a configuration that the Asserted Patents do not disclose and that runs contrary to the invention. As with Term 1, here also, the Court should construe Term 2 to limit an electrode array's association to only one well.

The plain language of the claim indicates that "each" electrode array is associated with "one" well. That should end the inquiry. Agilent's construction is also consistent with the '255 Patent specification, which does not disclose any embodiment in which a single electrode array is associated with more than one well. Indeed, the '255 Patent clarifies that "a single array . . . is at the bottom of a receptacle or well." *See* Ex. 3, 28:12-13. Moreover, the '255 Patent written description and figures significantly overlap with the disclosures cited above in Section II.A for the '752 and '080 Patents, which is incorporated herein by reference. *Id.*, FIG. 1A, FIG. 1B, 9:34-39 ("FIG. 1 shows schematic drawings of one design of a cell-substrate impedance measurement device of the present invention. A) depicts the substrate having 16 electrode arrays . . . . B) depicts a single electrode array of a device."), 28:11-13 ("[t]he device is assembled such that a single array of the substrate is at the bottom of a receptacle or well.").

2. Defendant's Answering Brief

Plaintiff seeks to construe this phrase, which appears only in one dependent claim. The dispute here is similar to Term 1, as Plaintiff is trying to read the limitation "only one distinct" well into dependent claim 10. The '255 specification uses the same words as in the claim language, and Axion's construction is consistent with the specification's descriptions of an electrode array being associated with a well. (*See, e.g.*, '255 at 7:56-67, 28:13-14, 28:26-30, 48:29-34.) Plaintiff suggests that "[t]he plain language of the claim … should end the inquiry," which is true—and why Axion's original position for Term 2 was that no construction is necessary. (Pl. Br. at 10; *see* D.I. 82 at 4.) Contrary to Plaintiff's suggestion, Axion's construction is not an "improper attempt

to broaden the scope" of the claim. (*See* Pl. Br. at 9.)

3. Plaintiff's Reply Brief

Axion fails to address Agilent's arguments concerning Term 2 and, instead, asks the Court to ignore them. However, Agilent's proposed construction seeks to resolve the dispute between the parties as to whether each array is associated with its own distinct well or whether the array can span multiple wells during claim construction, as it should be. *Markman*, 517 U.S. at 391. The distinct electrode array per well concept is important to the goal of the '255 Patent—monitoring cell-substrate impedance in individual wells of a multi-well plate. *See* Ex. 1, 3:1-3; *see also* Ex. 3, 1:18-30 (incorporating by reference the disclosures of the '752 Patent). Axion's proposed construction defeats this goal by allowing for an electrode array to span more than one well, meaning that each well would not be a distinct unit for monitoring cell-substrate impedance.

The '255 Patent specification clarifies that the invention requires one distinct array per one well. Ex. 3, 9:34-39; 28:11-13, Figs. 1A, 1B; Ex. 1, 7:20-25, 18:57-60, 19:36-38, 21:29-31, Figs. 1A, 1B). Axion cannot dispute the intrinsic record that supports Agilent's proposed construction but, instead, attempts to convert the claim's use of "one" well to "a" well, thus inviting the Court to deviate from plain language and introduce ambiguity into Term 2. Axion justifies this baseless argument by highlighting its original position that Term 2 need not be construed (Ax. Br. at 10-11), but the Court ordered Axion to propose a construction for Term 2 (D.I. 85); thus, Axion's original position going into claim construction is irrelevant. *See, e.g.*, *Barrday, Inc. v. Lincoln Fabrics Inc.*, No. 2022-1903, 2023 U.S. App. LEXIS 30502, at *7-8 (Fed. Cir. Nov. 16, 2023). Axion provides no explanation for its blatant attempt to change the claim's use of "one" well to "a" well. Ax. Br. at 10-11. The claim language evinces the inventors' intent to limit to "one . . . well" and thus, Agilent's proposed construction clarifying that "one" well means "one distinct" well should be adopted.

4. Defendant's Sur-Reply Brief

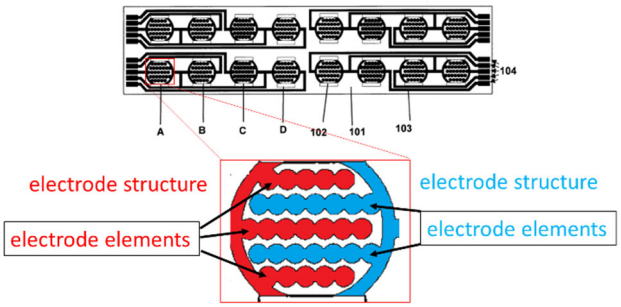
Plaintiff's position for Term 2 (that each array is associated with "only one distinct" well) is the mirror image of its position for Term 1 (that each well has "its own distinct electrode array"). The Court should decline Plaintiff's request to add "only one distinct" into dependent claim 10 of the '255 patent for reasons already explained for both Terms 1 and 2.

C. Term 3: "electrode array" ('080 Patent, claim 1; '255 Patent, claim 10; '752 Patent, claims 11, 14)

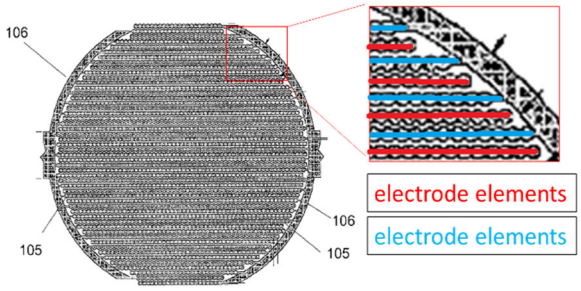
Agilent's Proposed Construction	Axion's Proposed Construction
"two or more electrode structures that operate as a distinct unit, each electrode structure having multiple electrode elements"	"two or more electrode structures that operate as a unit"

1. Plaintiff's Opening Brief

Agilent's construction, specifying that each structure has multiple electrode elements, comes directly from a clear teaching in the patent specification, while Axion's construction ignores this teaching. The specification not only defines "electrode array" as "two or more electrode structures that . . . operate as a unit," (Ex. 1, 10:60-64; Ex. 3, 16:41-44), it also states that each electrode structure "comprises multiple electrode elements." (Ex. 1, 16:6-9; Ex. 3, 8:1-3, 16:28-48, 24:48-50). Figure 1A of all three patents "shows schematic drawings of one design of a cell-substrate impedance measurement device . . . having 16 electrode arrays." Ex. 1, 7:20-28; Ex. 3, 9:34-42. Each electrode array depicted in Figure 1A comprises "two electrode structures" and "each electrode structure comprises multiple electrode elements." Ex. 1, 19:36-40, 19:55-60; *see also* Ex. 3, FIG. 1A-1B. A close-up view of one electrode array in Figure 1A (below, left) illustrates that an electrode array comprises multiple electrode elements. Likewise, the more complex electrode array illustrated in Figure 1B (below, right) also illustrates that each electrode array comprises multiple electrode elements.



Ex. 1 / Ex. 3, FIG. 1A (colorized)



Ex. 1 / Ex. 3, FIG. 1B (colorized)

See also Ex. 1, 19:55-63 ("in FIG. 1B . . . . electrode elements (105) of one electrode structure of the array alternate with electrode elements (105) of the other electrode structure of the array."). Axion's incomplete construction omits the multiple electrode elements per structure.

The prosecution history of patent applications related to the Asserted Patents (Application Nos. 10/705,447 and 11/055,639) also supports Agilent's proposed construction. During prosecution, Applicant clarified that the electrode arrays of the claimed devices comprise "two or more electrode structures that operate as a distinct unit, each electrode structure having multiple electrode elements." For example, during prosecution of Application No. 10/705,447, of which the Asserted Patents are continuations-in-part, the applicant argued that prior art U.S. Patent No. 6,630,359 disclosing "one and only ***one reception electrode*** . . . is completely different ***in Applicants invention where each electrode array comprises at least two electrode structures on the same plane and each electrode structure comprises at least two electrode elements***." Ex. 7 (App. No. 10/705,447, December 17, 2007 Resp.), at 44. Likewise, during prosecution of Application No. 11/055,639, a continuation-in-part ("CIP") of the '752 Patent,[6] Applicant distinguished prior art U.S. Patent No. 6,649,402 (Van der Weide), which did not have multiple electrode elements: "whereas the instant invention provides electrode elements extending from

[6] The added subject matter in the CIP was unrelated to the issue at hand.

electrodes, Van der Weide provides unbranched electrode wires." Ex. 10 (App. No. 11/055,639, February 13, 2009 Resp.), at 15. The prior art at issue in each of these related applications disclosed simple electrode structures of one working electrode (single element) and one ground electrode (also single element), that did not comprise multiple, branched electrode elements. Applicant's statements to distinguish its inventions from this single-element electrode supports Agilent's proposed construction that "each electrode structure [has] multiple electrode elements."

Axion's construction is incorrect because it fails to clarify that each electrode structure has multiple electrode elements, leaving the door open for claim construction arguments to the jury, which is not permitted. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996).

2. Defendant's Answering Brief

Plaintiff seeks to construe this term. The patent specifications state:

> As used herein, an "electrode array" or "electrode structure unit" **is two or more electrode structures that** are constructed to have dimensions and spacing such that they can, when connected to a signal source, **operate as a unit** to generate an electrical field in the region of spaces around the electrode structures. Preferred electrode structure units of the present invention can measure impedance changes due to cell attachment to an electrode surface. Non-limiting examples of electrode structure units are interdigitated electrode structure units and concentric electrode structure units.

('752 at 10:60-11:2 (emphasis added); '255 at 16:41-50.)[7] Consistent with this passage, the parties agree that an electrode array is "two or more electrode structures that operate as a unit." Plaintiff's construction, however, goes further, seeking to add two additional limitations that are neither supported by the claim language nor part of the specification's definition.

First, Plaintiff again seeks to improperly narrow a claim term by adding the word "distinct,"

[7] The '255 patent issued from a continuation-in-part (CIP) application of another CIP application of the '752 patent. ('255 at first page, field (63); *see* Ex. 20.) The '255 specification is different from the '752 specification; the '255 specification includes extensive additional disclosure that is not in the '752 specification.

arguing here for Term 3 that "electrode array" means that the electrode structures operate as a "distinct" unit. This is wrong, for reasons similar to those discussed above for Terms 1 and 2. In addition, parent patent specifications undermine Plaintiff's "distinct" modifier and are incorporated by reference into the patents-in-suit; U.S. Patent No. 7,470,533 is, in fact, specifically incorporated for its disclosures regarding electrode arrays. (*See, e.g.*, '752 at 20:38-44, 23:21-30 (referencing Application No. 10/705,447, which corresponds to the '533 patent); '255 at 27:25-31, 29:50-56.) The incorporated '533 parent patent states, for example, that (i) "The electrode elements, the electrodes, the electrode structures and the electrode structure units in the present apparatuses **can have any suitable configurations**, surface areas or surface modifications"; and (ii) "The electrodes or electrode structures comprised in the present microplate **can be arranged in any suitable ways**." ('533 at 36:17-20, 38:52-53 (emphases added).) This is another reason to reject Plaintiff's addition of "distinct" to the construction for Term 3.

Second, Plaintiff's construction includes the further limitation of "each electrode structure having multiple electrode elements." But this limitation is already explicit in both claim 1 of the '080 patent and claim 10 of the '255 patent, and thus there is no reason to read this limitation into the construction of "electrode array." (*See* '080 claim 1 (68:40-42); '255 claim 10 (99:62-64).) In contrast to the '080 and '255 patent claims, the patentee omitted this limitation in the '752 patent claims. The '752 specification's definition for "electrode array" (reproduced above) says nothing about requiring multiple electrode elements in each electrode structure, and the '752 specification describes the use of multiple electrode elements as "preferred." (*See, e.g.*, '752 at 10:60-11:2, 16:12-15, 17:27-30.) Plaintiff also points to file histories of two related patents—U.S. Patent Nos. 7,470,533 and 7,560,269—but all of the claims in those related patents explicitly recite that an electrode structure has "at least two" or "multiple electrode elements." (*See* '533 claim 1 (72:13-

17); '269 claim 1 (68:5-7).) The Court should reject Plaintiff's attempt to add "each electrode structure having multiple electrode elements" to the construction of "electrode array."

3. Plaintiff's Reply Brief

First, Axion's argument that an electrode array should not be construed to operate as a "distinct" unit disregards the purpose of the invention in the Asserted Patents. "Distinct" is necessary to clarify the meaning of the Term 3 for the same reasons as with respect to Terms 1 and 2. Without the clarification, Term 3 remains ambiguous as to whether the electrode structures must be a part of a distinct electrode array or whether they can be shared. The patent specification makes clear that electrode arrays cannot be shared and that each has its own electrode structures, i.e., each electrode array operates as a distinct unit. Ex. 1, 10:60-64; Ex. 3, 16:41-44.

Second, Axion's argument that parent patent 7,470,533 "undermine[s] Plaintiff's 'distinct' modifier" (Ax. Br. at 15) is wrong because, just as with the Asserted Patents, the '533 Patent does not disclose any embodiments in which a single electrode array operates across more than one well. The '533 Patent's disclosures that electrode arrays "can have any suitable configurations" or "can be arranged in any suitable way[]" cannot change the Asserted Patents' goal of monitoring cell-substrate impedance in individual wells of a multi-well plate. *See* §§ III.A.3, III.B.3, *supra*.

Third, Axion mischaracterizes that "each electrode structure having multiple electrode elements" is a "preferred" embodiment and fails to explain how the Court could disregard the abundant intrinsic support cited by Agilent in its Opening Brief. Ax. Br. at 15. This is illustrated at least by the following disclosure that is not limited to preferred embodiments: "In devices of the present invention, an electrode array comprises two electrode structures, each of which comprises multiple electrode elements, or substructures." Ex. 1, 16:6-9; Ex. 3, 24:48-50; *see also* Ex. 1, Figs. 1A, 1B; Ex. 3, Figs. 1A, 1B. Thus, at least the portions of the intrinsic record cited above illustrate that the patentee intended an "electrode array" to comprise electrode structures, each of which

comprises multiple electrode elements. Even Axion's expert, Dr. Fair, understands from the specification that electrode elements are part of an electrode array. Fair ¶¶ 38, 60-61, 78-79, 83.

4. Defendant's Sur-Reply Brief

Plaintiff offers myriad justifications for its Term 3 construction, including "the purpose of the invention," the need "to clarify the meaning" of a term that otherwise "remains ambiguous," and the lack of a disclosed embodiment in which "a single electrode array operates across more than one well." (Reply at 16.) But the specifications' explicit definition of the term "electrode array" does not state that (a) the electrode structures operate as a "distinct" unit, or (b) each electrode structure has "multiple electrode elements." (*See* '752 at 10:60-11:2; '255 at 16:41-50; Ax. Br. at 14-16.) And while a patent's definition for a term can be ambiguous (*see*, *e.g.*, Terms 7-8 and the '255 patent's definition of "cell index"), Plaintiff has made no showing that this is the case for "electrode array," or that such ambiguity is somehow remedied by the addition of the word "distinct." Similarly, Plaintiff fails to explain how the "purpose of the invention" has been thwarted absent the "distinct" modifier.

With respect to Plaintiff's construction requiring "each electrode structure having multiple electrode elements," Plaintiff never addresses the fact that both '080 patent claim 1 and '255 patent claim 10 already explicitly recite this separate requirement. (*See* Reply at 16-17; Ax. Br. at 15-16; '080 claim 1 (68:40-42); '255 claim 10 (99:62-64).) The Court should decline to import this requirement into the '752 claims by shoehorning it into the construction of "electrode array."

D. Term 4: "is individually addressed" / "electrode array is individually addressed" ('080 Patent, claim 1; '752 Patent, claims 11, 14)

Agilent's Proposed Construction	Axion's Proposed Construction
Agilent submits that the terms "electrode array" and "individually addressed" should be construed separately. individually addressed: "can have a measuring voltage applied	"the electrical traces and connection pads of the arrays are configured such that an array can be connected to an

to the electrode array independent of any measuring voltage applied to another electrode array, at a given time" / "electrode array can have a measuring voltage applied to it independent of any measuring voltage applied to another electrode array, at a given time"	impedance analyzer in such a way that a measuring voltage can be applied across a single array at a given time by using switches"

1. Plaintiff's Opening Brief

a. The terms "electrode array" and "is individually addressed" should be construed separately.

The terms "electrode array" and "is individually addressed" should be construed separately. Accepting Axion's proposal to construe the full term "electrode array is individually addressed," in addition to the term "electrode array" (irrespective of which construction is adopted) could lead to inconsistent and nonsensical results, where the term "electrode array" would be construed twice in the same set of claims and would also appear in the asserted claims outside of the phrase "electrode array is individually addressed." *See* Ex. 1, claims 11, 14; Ex. 2, claim 1; *Am. Innotek, Inc. v. United States*, 126 Fed. Cl. 468, 475-85 (2016) (refusing to construe the term "prevent" as "wholly prevent" where the term allowed for leakage in another claim) (citing *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003) ("[T]he same claim term in the same patent or related patents carries the same construed meaning.")). To the extent the Court construes "electrode array is individually addressed," the construction should begin with "electrode array [as construed by the Court]" and conclude with a construction of "is individually addressed," as explained immediately below.

b. The term "is individually addressed" should be construed as "can have a measuring voltage applied to the electrode array *independent of* any measuring voltage *applied to another electrode array*, at a given time."

The dispute between the parties regarding the "is independently addressed" phrase revolves around (1) the clarifying "independent of" language, proposed by Agilent, and (2) Axion's proposed introduction of two limitations: "using switches" and "the electrical traces and

connection pads of the arrays." First, "independent of" is necessary to clarify the meaning of this term in light of the extensive prosecution history of the '752 and '080 Patents surrounding this term – there must be an ability to apply a measuring voltage to the electrode array of one well independent of applying a measuring voltage to the electrode array of another well, in order to take independent measurements. *See, e.g.*, Ex. 9 (U.S. App. No. 11/055,639, July 10, 2008 Resp.). Omitting this clarification (as proposed by Axion) would leave the term exposed to an interpretation inconsistent with the prosecution history. *Advanced Cardiovascular Sys. v. Scimed Life Sys.*, 261 F.3d 1329, 1339 (Fed. Cir. 2001) (noting "[t]he prosecution history is often of critical significance in determining the meaning of the claims") (internal quotations omitted). Second, the Court should decline to add the "using switches" and "the electrical traces and connection pads of the arrays" limitations proposed by Axion because they improperly read a preferred embodiment from the specification into an otherwise broader claim. *Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1364-1365 (Fed. Cir. 2003) ("a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment."); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1328 (Fed. Cir. 2002) ("Instead of using the specification as context, the district court apparently limited the 'clip (28)' recited in claim 1 to the embodiment described in the specification."). Third, substituting Axion's proposed construction for the disputed term results in a nonsensical limitation. *ASM America, Inc. v. Genus, Inc., N.V.*, 401 F.3d 1340, 1346-47 (Fed. Cir. 2005) (rejecting plaintiff's proposed construction because it would "lead[] to a nonsensical result").

The specifications of the '752 and '080 Patents explain that an electrode array is individually addressed when "a measuring voltage can be applied across a single array at a given time." Ex. 1, 16:27-28. Axion's proposed construction fails to capture the meaning of the term,

which was clarified through the prosecution history. *Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc*., 815 F.3d 1314, 1320 (Fed. Cir. 2016) ("A party is . . . 'not entitled to a claim construction divorced from the context of the written description and prosecution history.'"). During the prosecution history of an application to which the '752 and '080 Patents claim priority, the Applicant thoroughly explained that for an electrode array to be "individually addressed," not only must the measuring voltage be applied to that array, but the same measuring voltage ***cannot*** be applied to another array (a requirement missing from Axion's construction):

> [In prior art reference, Chan, i]f one activates one row interconnect and one column interconnect, more than a single electrode is activated. […] Since the current travels through two additional passages, ***one is activating not only electrode array No 2 but also additional electrode arrays***. Thus, whilst Chan's row-column addressing appears to significantly reduce the number of connections, ***it does not allow a single electrode array to be individually addressed***.

Ex. 9 at 13-14; *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1381 (Fed. Cir. 2022) (overturning district court's finding of non-infringement where district court's construction was not "consistent with the claims, specification, and prosecution history"). In other words, that voltage must be applied to an array in question "independent of" any other electrode array.

The Applicant distinguished the Chan prior art reference (discussed above) from the claimed invention precisely on the basis that Chan was incapable of addressing each electrode array ***independent of*** another electrode through the application of a measuring voltage because when the "current travels through two additional passages, one is activating not only electrode array No 2 ***but also additional electrode arrays***." Ex. 9 at 14. Axion's construction fails to capture this important distinction, leaving the interpretation of this phrase open to capturing prior art that was clearly excluded from the scope of the claimed invention. *In re Packard*, 751 F.3d 1307, 1324-1325 (Fed. Cir. 2014) (concurring) (listing the "good reasons … ambiguity in claim constructions should be disapproved."); *Ancora Techs. v. Apple, Inc*., 744 F.3d 732, 739 (Fed. Cir. 2014)

(affirming district court's rejection of indefiniteness arguments which were contrary to the prosecution history). This gap in clarity with respect to the meaning of "individually addressed," as expressed in the prosecution history, is fatal to Axion's construction. *Chaffin v. Braden*, 696 F. App'x 1001, 1006-1007 (Fed. Cir. 2017) (reversing district court's construction for failing to account for meaning disclosed in the prosecution history).

In addition, the Court should reject Axion's attempt to read additional limitations into the claim. *Teleflex,* 299 F.3d at 1326; *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009) ("[C]ourts must take care not to import limitations into the claims from the specification."). Contrary to Axion's proposal, "is individually addressed" does not require: (1) any particular portion of the electrode array to be "configured" in a particular way, including with regard to or in relation to "electrical traces and connection pads of the array;" or (2) "using switches." In fact, the passage of the specification relied on by Axion states that it is a preferred embodiment:

> ***Preferably***, each array of a device is individually addressed, meaning that the electrical traces and connection pads of the arrays are configured such that an array can be connected to an impedance analyzer in such a way that a measuring voltage can be applied across a single array at a given time by using switches (such as electronic switches).

Ex. 1, 16:23-29. Just because something appears in the specification does not mean that it is a limitation that should be imported into a claim construction. *Teleflex,* 299 F.3d at 1326 ("That claims are interpreted in light of the specification does not mean that everything expressed in the specification must be read into all the claims.")

Moreover, substituting Axion's proposed construction for either of the "individually addressed" terms resulting in a nonsensical claim as shown below:

> wherein the electrode array <u>the electrical traces and connection pads of the arrays are configured such that an array can be connected to an impedance analyzer in such a way that a measuring voltage can be applied across a single array at a given time by using switches</u>

See ASM Am., Inc., 401 F.3d at 1346-47 (rejecting construction resulting in nonsensical claim). Even if the full phrase "the electrode array is individually addressed" is replaced with Axion's construction, the substitution still yields a nonsensical result.

2. Defendant's Answering Brief

Term 4 appears in the independent claims of the '752 and '080 patents.[8]

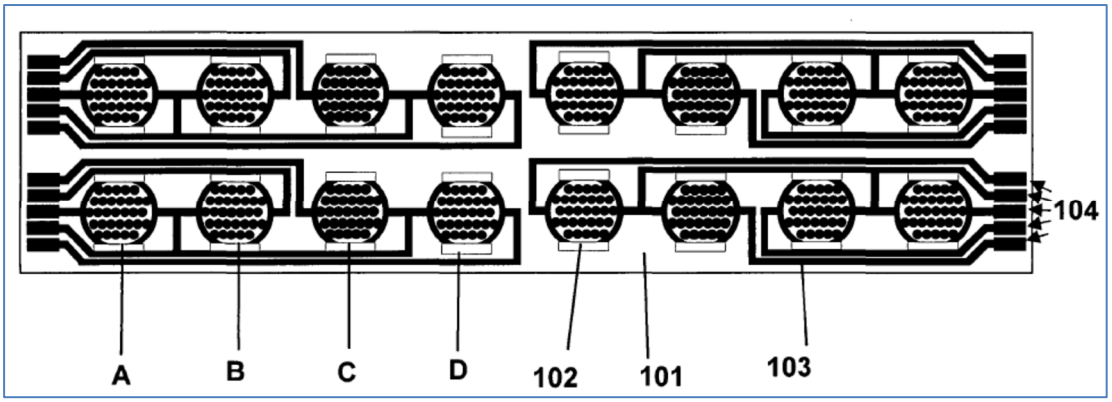
***The Specification*:** Axion's construction for Term 4 is straight out of the specification:

> Preferably, each array of a device is individually addressed, **meaning that** the electrical traces and connection pads of the arrays are configured such that an array can be connected to an impedance analyzer in such a way that a measuring voltage can be applied across a single array at a given time by using switches (such as electronic switches).

('752 at 16:23-29 (emphasis added).) The specification is unequivocal, and Plaintiff offers no reason to deviate from the '752 specification's own definition.

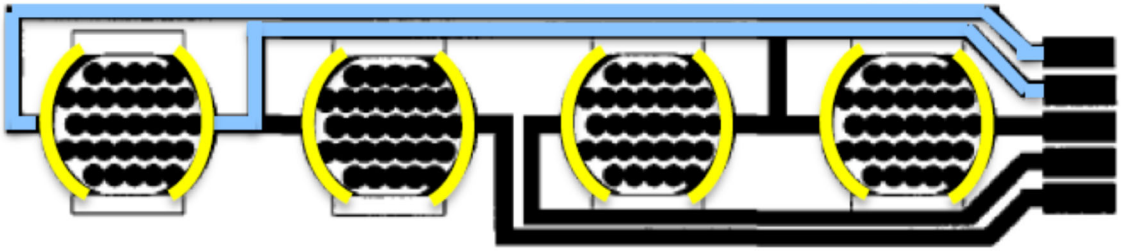
Figure 1A of the patent, showing an embodiment with 16 electrode arrays, is instructive for further understanding the limitation that each "electrode array is individually addressed." In Figure 1A (reproduced below), there are four groups, each having four electrode arrays. ('752 at Fig. 1A, 7:20-24, 19:36-20:5.)

[8] During the pre-briefing exchanges, Axion identified "electrode array is individually addressed" as the phrase to be construed, while Plaintiff identified the sub-phrase "is individually addressed." Axion believes it is better to construe the entire phrase because the term "electrode array" appears separately in the claims before the phrase requiring that each "electrode array is individually addressed." ('752 at 70:51-55; '080 at 68:37-43.) Contrary to Plaintiff's suggestion, it is not "inconsistent and nonsensical" to do so. (*See* Pl. Br. at 18.) Plaintiff's primary objection appears to be that the term "electrode array" is already in Term 3. But "electrode array" also appears in Term 1, a term identified by Plaintiff for construction, so Plaintiff's objection to including "electrode array" within Term 4's phrase is not well founded.



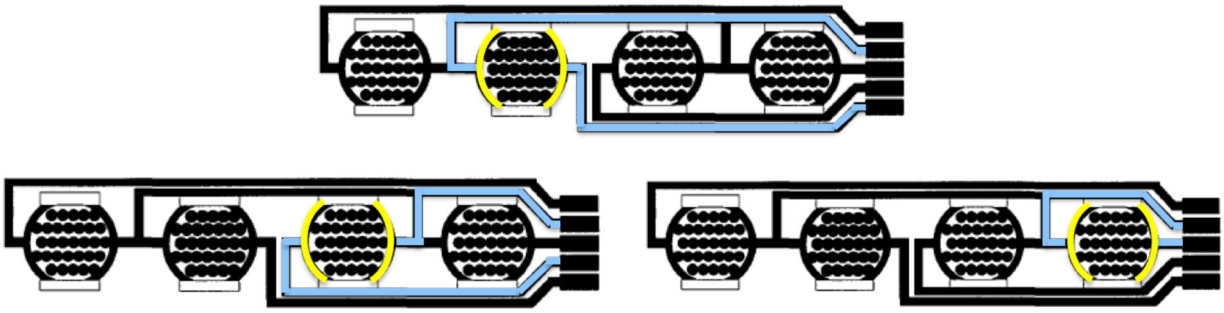
Each electrode array 102 has an arc-shaped bus (not numbered) on each end, and there is an electrical trace 103 connected to, and extending from, each arc-shaped bus of each array. ('752 at 19:36-20:5, 10:46-11:32; *see also id*. at Fig. 1B.) Electrode elements (or fingers) extend from each opposing electrode bus in alternating fashion to form the electrode array. (*See id*.; *see also* Pl. Br. at 12-13.) Each electrical trace 103 is connected to a connection pad 104. ('752 at 19:36-20:5.) Each group of four electrode arrays has five connection pads 104—one common connection pad 104 connected to all four electrode arrays and four other individual connection pads 104 that are each connected to only one electrode array. (*See id*.)

As the '752 patent explains, switches can turn on and off a connection from the impedance analyzer to each individual electrode array. ('752 at 16:23-39, 23:44-24:34.) Using the upper-right quarter of Figure 1A, and to assist the Court, Axion has annotated the drawings below to show how the electrode arrays in this embodiment are individually addressed in accordance with the specification's definition. (*See* '752 at 16:23-29.) In the first annotated drawing, the electrode buses of each of the four electrode arrays are shown in yellow, and the far-left electrode array is connected via electrical traces (shown in light blue) to the top two connection pads on the right.



('752 at Fig. 1A (partial excerpt, annotated).) When the far-left electrode array is connected to the impedance analyzer via the connection pads, the blue-highlighted electrical traces show the path of the voltage/current from the top connection pad through the far-left electrode array to the common connection pad. (*See, e.g.*, '752 at 10:46-11:32, 16:18-29, 19:36-20:16, 22:62-65, 23:44-24:34.) As can be seen, based on the configuration of the connection pads and electrical traces, a measuring voltage is applied to only the far-left electrode array, and not any of the other three electrode arrays.

The electrical paths for each of Figure 1A's other three electrode arrays are shown below.

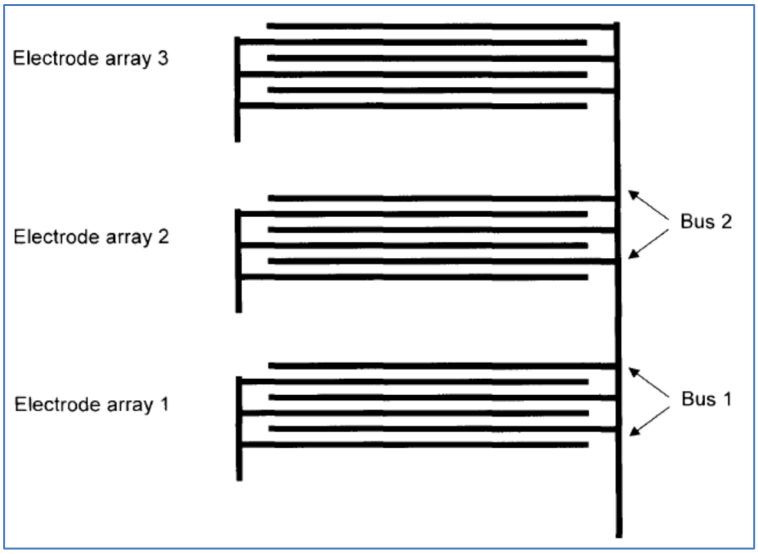


('752 at Fig. 1A (partial excerpt, annotated).) The configuration in Figure 1A's embodiment is consistent with the specification's definition and Axion's construction—*i.e.*, "the electrical traces and connection pads of the arrays are configured such that an array can be connected to an impedance analyzer in such a way that a measuring voltage can be applied across a single array at a given time using switches."

***The File Histories*:** As the Court knows, the specification is the "single best guide to the meaning of a disputed term," while prosecution history may also be "useful for claim construction

purposes." *Phillips*, 415 F.3d at 1315, 1317. Here, Plaintiff asserts that there "is extensive prosecution history of the '752 and '080 Patents surrounding this term." (Pl. Br. at 19.) This is incorrect, and Plaintiff did not actually cite any file history from the '752 and '080 patents for Term 4. (*See* Pl. Br. at 18-22 (citing only file history from related '269 patent); *see also* D.I. 82-4, 82-5, 82-6 ('752 file history excerpts); D.I. 82-17 ('080 file history excerpts).)

The patentee did, however, discuss electrode arrays being "individually addressable" during prosecution of U.S. Patent No. 7,560,269, which is a child CIP of the '752 patent.[9] More specifically, in prosecuting the '269 patent, the patentee distinguished electrode arrays that are individually addressable from the configuration of electrode arrays shown in the figure below, which are **not** individually addressable.



(*See* D.I. 82-10 at AGILE0063220-221.)

The patentee created the above drawing to respond to a rejection during prosecution of the '269 patent (hereafter, the "'269 response figure"). In the '269 response figure, electrode arrays

[9] Plaintiff incorrectly states that the '269 patent is "an application to which the '752 and '080 Patents claim priority," when instead it is the '269 patent that claims priority to the '752 patent. (Pl. Br. at 20; *see* '269 at front page, field (63); *see* Ex. 20.)

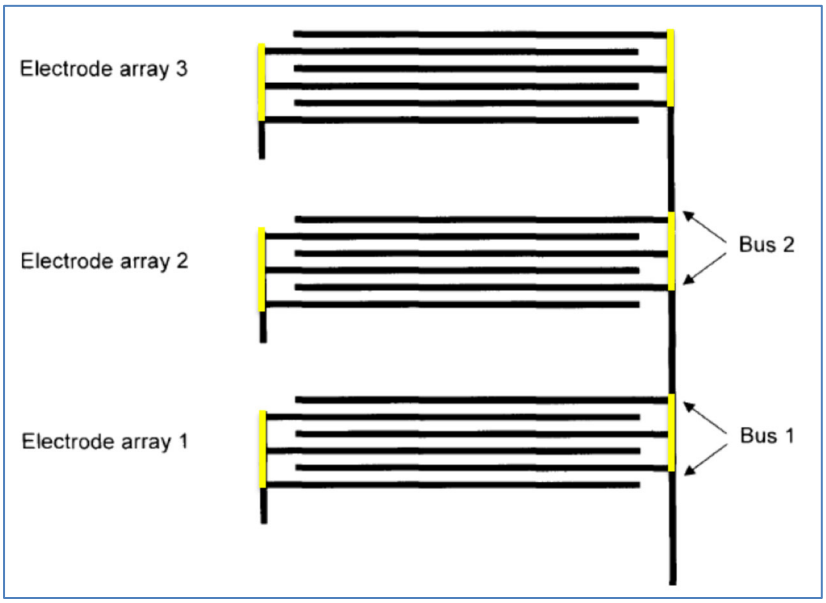
1, 2, and 3 have a common column interconnect on the right. (D.I. 82-10 at AGILE0063220.)[10]

Referring to the '269 response figure, the patentee explained:

> When an electrical voltage is applied to the selected electrode array No 3, electrical current would flow not only through the electrode arrays in the selected array No 3 but also through the right-side electrode buses for array No 1 and No 2 since such electrode buses of No 1 and No 2 are located on or within the electrical trace of the selected array No 3.

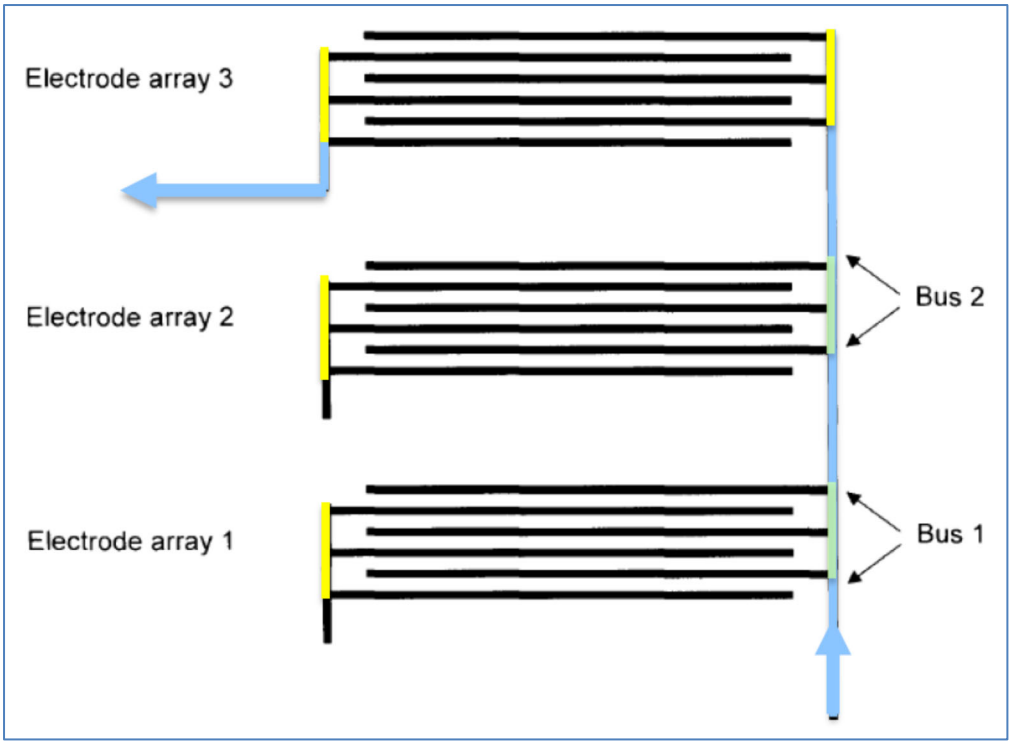
(D.I. 82-10 at AGILE0063220.) According to the patentee, and binding here on Plaintiff, because current flows through a portion of unselected electrode arrays 1 and 2 when electrode array 3 is "activated or addressed for impedance measurement," the electrode arrays as configured in the '269 response figure are **not** "individually addressed." (D.I. 82-10 at AGILE0063220.)

To help illustrate the distinction the patentee made, Axion annotated the '269 response figure below to show the buses of each electrode array in yellow.



In the next annotated figure below, when current is applied to selected electrode array 3, the path of the current to/from electrode array 3's two buses is highlighted in blue.

[10] For the left side of the figure, the patentee did not explain any connections of the electrode arrays (*e.g.*, to connection pads or otherwise). (*See* D.I. 82-10 at AGILE0063220-221.)

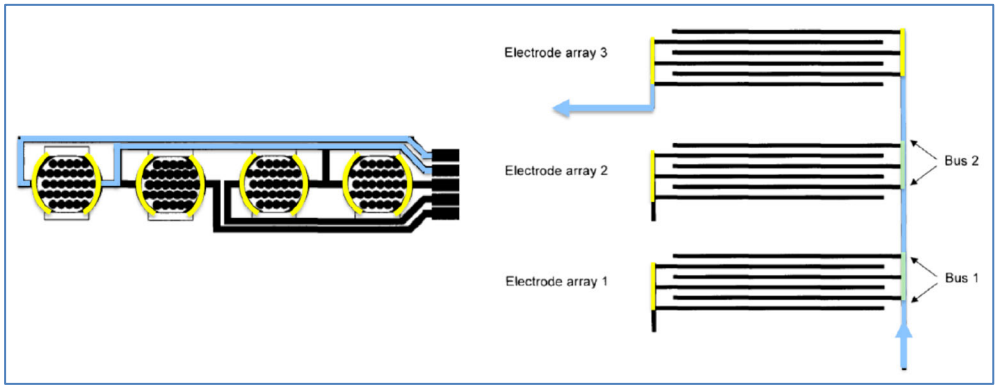


Current flows through all three electrode arrays, not just selected electrode array 3, because the right side electrical trace for electrode array 3 overlaps with the two buses that are part of electrode arrays 1 and 2. (D.I. 82-10 at AGILE0063220.) Note that, in this figure, Axion has colored electrode buses 1 and 2 green (yellow + blue) to reflect the current conducted through those buses.

In prosecuting the CIP '269 patent, the patentee explained that: (a) current flow through even just the electrode buses of unselected electrode arrays 1 and 2 would result in the generation of electrical fields in their vicinity; (b) cell-electrode interaction near buses 1 and 2 could thus contribute to the impedance measurement for selected array 3; and (c) "such effects" are "not desired for the invention." (D.I. 82-10 at AGILE0063220.) The patentee confirmed that it is of no moment that "there is no electrical current flowing through the electrode elements [*i.e.*, the alternating fingers] for the unselected array No 1 and No 2." (*Id.*) The patentee was unequivocal: the device in the '269 response figure "does not meet the individually addressable requirement"

because current flows through an electrode bus of an unselected electrode array. (*Id.*)[11]

The patentee's discussion in prosecuting the '269 patent is consistent with the '752 specification's definition. Unlike, for example, the annotated version of Figure 1A of the '752 patent discussed above (which is representative of the claimed invention), the electrical traces in the '269 response figure are **not** configured such that a measuring voltage can be applied across a single array because the electrical traces for one electrode array overlap with electrode buses of other electrode arrays. Both annotated figures are reproduced again below, and the difference the patentee emphasized while prosecuting the CIP '269 patent is clear.



In the design according to the asserted claims, the current for a selected array does not flow through other, unselected electrode arrays. Thus, the claimed device's electrode arrays are "individually addressed." In the '269 response figure, however, the current for a selected array also flows through unselected electrode arrays, and thus this device's electrode arrays are not "individually addressed."

***The Problems with Plaintiff's Construction*:** Plaintiff's construction (i) plucks a small portion of the language out of the specification passage at 16:23-29 about a measuring voltage

[11] The Patent Office also confirmed that buses of one electrode array being within electrical traces for another electrode array "prevents one from individually addressing a desired array." (D.I. 82-11 at AGILE0063255-256 (citing patentee's office action response at pp. 22-23 (which corresponds to D.I. 82-10 at AGILE0063220-221)).)

being applied across an electrode array, and (ii) asserts that one needs to look at the CIP '269 patent's file history to explain this language. (*See* Pl. Br. at 19-21 (citing '752 at 16:27-28 and '269 patent file history).) Plaintiff incorrectly asserts that the word "Preferably" indicates that the specification passage at 16:23-29 is just describing "a preferred embodiment." (Pl. Br. at 21.) In the cited passage, however, "Preferably" modifies the phrase "each array of a device is individually addressed," while the words "meaning that" indicate that the language that follows is definitional for the phrase "each [electrode] array of a device is individually addressed." (*See* '752 at 16:23-29; *see also id*. at 4:26-29 ("In preferred embodiments of this aspect of the present invention, each electrode array of the multiple-well device is individually addressed.").) This Court has found that similar phrases signal an intent to provide a definition. *See, e.g.*, *Guardant Health, Inc. v. Foundation Med., Inc.*, No. 17-1616-LPS-CJB, 2019 WL 4233598, *7 (D. Del. Sept. 6, 2019) (finding "patentee's use of 'that is' here clearly signals an intent to define what it means to be 'non-uniquely tagged'") (citations omitted), *report and recommendation adopted*, 2019 WL 8370845 (D. Del. Nov. 5, 2019).

Further, while the parties each assert that particular portions of the '269 file history are informative, Plaintiff seeks to elevate one aspect of the CIP '269 patent's file history over the '752 specification. (*See* Pl. Br. at 18-21.) This is not the correct approach. *See Phillips*, 415 F.3d at 1315-1317. Although it does appear from Plaintiff's opening brief that the parties' competing constructions may have at least some common ground, Plaintiff's construction and its "independent of" concept are murky and lack clarity, creating potential ambiguity where the patentee's words from the specification do not.

For the above reasons, the Court should adopt Axion's construction for Term 4.

3. Plaintiff's Reply Brief

Axion ignores the nature of the invention as informed by the specification and the prosecution history and asks the Court simply copy and paste words from the specification without attempting to clarify the disputed meaning of Term 4, providing no plausible explanation, legally or factually, of why the "using switches" and the "electrical traces and connection pads" preferred embodiment limitations should be read into a much broader Term 4. And there is none.

The Court should adopt Agilent's proposed clarifying "independent of." The construction of Term 4 must be informed by the specification and the prosecution history. Both parties rely on the same portions of each. But the goal of claim construction is to clarify the meaning of a claim term, not to copy and paste words from the specification. *See, e.g.*, *Braintree Labs.*, 749 F.3d at 1360. During the prosecution of a related application, which claims priority to the '752 and '080 Patents,[12] the patentee explained that, for an electrode array to be "individually addressed," not only must the measuring voltage be applied to that array, but the same measuring voltage **cannot** be applied to another array (a requirement missing from Axion's construction). Axion's attack on the "independent of" language amounts to one unsupported, conclusory sentence. *See* Ax. Br. at 29. Yet, Axion's description of the specification and related prosecution history only highlights the need to include this language as part of the construction. *See, e.g., id.* at 24, 28. When describing Fig. 1A of the '752 Patent, Axion concedes that "a measuring voltage

[12] In its Opening Brief, Agilent inadvertently stated that the '752 and the '080 Patents claim priority to the '269 Application. However, the converse is true. That difference does not affect the argument. *Capital Mach. Co. v. Miller Veneers, Inc.*, 524 F. App'x 644, 649 (Fed. Cir. 2013) ("We have held that the prosecution history regarding a claim term is pertinent when interpreting the same term in both later issued and earlier-issued patents in the same family.") (citation omitted); *Biovail Corp. Int'l v. Andrx Pharms., Inc.*, 239 F.3d 1297, 1301 (Fed. Cir. 2001) ("When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies" equally.).

is **applied to only** the far-left electrode array, **and not any of the other** three electrode arrays." *Id*. at 24 (emphasis added). Similarly, when describing the prosecution history, Axion concedes that "[i]n the design according to the asserted claims, the current for a selected array does not flow through other, unselected electrode arrays" and "[t]hus, the claimed device's electrode arrays are 'individually addressed,'" whereas "[i]n the [prior art], however, **the current for a selected array also flows through unselected electrode arrays**, and thus this device's electrode arrays are not 'individually addressed.'" *Id*. at 28 (emphasis added). Axion's proposed construction at most addresses the first aspect of the current flowing through a selected electrode array ("a measuring voltage can be applied to a single array at a given time") but fails to capture the distinction made over prior art (and described in the specification) prohibiting the current from flowing through the unselected electrode arrays. *In re Packard*, 751 F.3d 1307, 1324-1325 (Fed. Cir. 2014) (concurring) (listing the "good reasons . . . ambiguity in claim constructions should be disapproved."); *Chaffin v. Braden*, 696 F. App'x 1001, 1006-1007 (Fed. Cir. 2017) (reversing district court's construction for failing to account for meaning disclosed in the prosecution history).

The Court should reject Axion's attempt to read in two narrowing limitations. The Court should reject Axion's proposed addition of "by using switches," because it improperly reads into the claim a preferred embodiment where switches are used in the implementation of an individually addressed electrode array. It is improper to import limitations from preferred embodiments, even if consistent with the specification and the prosecution history. *See* Ax. Br.at 31; *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1326 (Fed. Cir. 2002); *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009). While Axion focuses on the words "meaning that" in the specification disclosure as support for its construction, it fails to address that the passage begins with the word "[p]referably." Ax. Br. at 22, 29 (citing Ex. 1 at 16:23-29). Moreover,

the portion of specification on which Axion relies in support of inclusion of the "by using switches," and which Axion cites, indicates that they are only preferred embodiments, and not the full scope of the invention. *See, e.g.*, *id*. at 22 (citing Ex. 1, 16:23-29 ("Preferably, . . . using switches")). However, both the Federal Circuit and the Courts in this District have held that "preferably" signifies a preferred embodiment. *See Halliburton Energy Servs. V. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) ("[T]he specification states that 'preferably' … strongly suggests that absence of clays is simply a preferred embodiment."); *Huvepharma EOOD v. Associated British Foods, PLC*, Civil Action No. 18-129-RGA, 2019 U.S. Dist. LEXIS 103832, at *19 (D. Del. June 21, 2019) (refusing to import limitation from preferred embodiment where specification used "preferably" to describe a preferred embodiment). Axion's reliance on *Guardant Health, Inc. v. Foundation Med., Inc.* (Ax. Br. at 29) is similarly misplaced. Unlike here, the language at issue in *Guardant Health* did not relate to a preferred embodiment. 2019 WL 4233598, *7 (D. Del. Sept. 6, 2019). Further, the "by using switches" phrase in Axion's construction violates Federal Circuit's longstanding precedent against reading additional limitations into claim terms. *Teleflex,* 299 F.3d at 1326 (Fed. Cir. 2002); *Abbott Labs*, 566 F.3d at 1288 ("[C]ourts must take care not to import limitations into the claims from the specification.").

Similarly, the Court should reject Axion's proposed inclusion of "the electrical traces and connection pads of the arrays," because it (1) amounts to construing the term "electrode array" twice, (2) reads in a preferred embodiment, and (3) is entirely unnecessary to the construction.

Axion's response to Agilent's argument that Axion's construction of Term 4 amounts to constructing the term "electrode array" twice – as part of both Term 3 and 4 – lacks merit. Instead of explaining why its construction of Term 4 does not amount to construing the term "electrode array" again (since it is already being construed as part of Term 3), Axion argues that Agilent is

guilty of the same because the term "electrode array" also appears in proposed construction for Term 1. Ax. Br. 22, n.8. But this is false and nonsensical. Term 1 contains the words "electrode array," and both parties' proposed constructions include it as part of their respective constructions. This does not amount to construing "electrode array" as part of Term 1. In contrast, Term 4 contains the term "electrode array." While, Agilent's proposed construction for Term 4 leaves the term "electrode array" intact, Axion's does not, meaning that Axion's proposed construction for Term 4 also defines the term "electrode array" through the injection of "the electrical traces and connection pads" limitations which limit the scope of Term 4 by what the "electrode array" must comprise and by what portions of the added limitations of the "electrode array" (which are not part of either party's Term 3 definitions) must perform the claimed functionality, and contrary to law. *Am. Innotek, Inc. v. United States*, 126 Fed. Cl. 468, 475-85 (2016)). Axion's attempted inclusion of "the electrical traces and connection pads" by paraphrasing the specification and omitting the words "preferably" and "example" amounts really attempting to import preferred embodiments into the claims. *See* Ax. Br.at 23-24 (citing Ex. 1, 16:18-29).

4. Defendant's Sur-Reply Brief

Axion meticulously explained the specification's definition of Term 4 using annotated figures from both the patent and the file history of the related child CIP '269 patent. Plaintiff nevertheless criticizes Axion's construction, suggesting it does not "clarify the disputed meaning" and that Axion provides "no plausible explanation." (Reply at 30.) Plaintiff is wrong.

First, the relevant specification passage (reproduced again below) is a definition:

> Preferably, each array of a device is individually addressed, **meaning that** the electrical traces and connection pads of the arrays are configured such that an array can be connected to an impedance analyzer in such a way that a measuring voltage can be applied across a single array at a given time by using switches (such as electronic switches).

('752 at 16:23-29 (emphasis added).) Plaintiff argues that this definition is somehow not

applicable to Term 4 because the word "Preferably" appears at the beginning of the sentence. (*See* Reply at 30-33.) Plaintiff's position defies plain English (*see* Ax. Br. at 29) and is contrary to Federal Circuit authority. In *Edwards Lifesciences LLC v. Cook Inc*., the patentee argued that "the inventors gave their alleged definition only in the context of a preferred embodiment, so it does not limit the definition of 'malleable' in all contexts in the specification." 582 F.3d 1322, 1334 (Fed. Cir. 2009). The Federal Circuit soundly rejected the patentee's position:

> Contrary to Edwards' argument, the location within the specification in which the definition appears is irrelevant. *See Boss Control, Inc. v. Bombardier Inc.*, 410 F.3d 1372, 1378 (Fed. Cir. 2005) (following inventors' definition, even though it appeared in connection with the description of a preferred embodiment). As the court correctly reasoned, the specification's use of "i.e." signals an intent to define the word to which it refers, "malleable," and that definition was not limited to the embodiment being discussed.

Id. The same reasoning applies to the inventors' use of "meaning that" in the '752 specification. Moreover, the definitional passage at 16:23-29 is the specification's **only** explanation of "each electrode array is individually addressed."

Second, Plaintiff complains about the phrases (i) "electrical traces and connection pads" and (ii) "by using switches" in Axion's construction. (*See* Reply at 31-33.) But the specification's definition uses these words and thus dictates their inclusion in the proper construction of "each electrode array is individually addressed." To the extent Plaintiff argues that Axion's construction creates confusion about whether the "electrical traces and connection pads" are part of the "electrode array" (Term 3), they are not, consistent with the specification's definitions of "electrode array," "electrical traces," and "connection pad." (*See* '752 at 10:60-11:32, 16:23-29.)

Third, Plaintiff concedes that Axion accurately described Term 4's application to both the patent's embodiment and the referenced prior art, but urges that Axion's construction "fails to capture the distinction made over prior art … prohibiting the current from flowing through the unselected electrode arrays." (Reply at 31.) Axion disagrees because its construction requires

application of the measuring voltage "across a single array," precluding current in other, unselected arrays. Nonetheless, Axion is willing to include the additional language below (underlined) in its construction in an effort to address Agilent's stated concern and narrow the issues before the Court:

> the electrical traces and connection pads of the arrays are configured such that an array can be connected to an impedance analyzer in such a way that <u>(i)</u> a measuring voltage can be applied across a single array at a given time by using switches<u>, and (ii) during application of the measuring voltage to the single array, no current is conducted in any portion of any other electrode array</u>

E. Term 5: "electronic circuitry capable of engaging said device and selecting and connecting electrode arrays within any of the multiple wells to the impedance analyzer" ('080 Patent, claim 1) / "electronic circuitry that can engage said device and selectively connect said two or more electrode arrays of said device to said impedance analyzer" ('752 Patent, claims 11, 14)

Agilent's Proposed Construction	Axion's Proposed Construction
"electronic circuitry capable of physically and electrically engaging the device, and selecting and electrically connecting to one, some, or all of the [two or more] electrode arrays to the impedance analyzer"	"electronic circuitry capable of engaging the device and selecting and connecting individual electrode arrays of the device to the impedance analyzer"

1. Plaintiff's Opening Brief

The Court should adopt Agilent's construction because it clarifies the meanings of the terms consistent with the specification of the '752 and '080 Patents by explaining: (1) the type of ***engagement*** required by the claims; (2) the type of ***connection*** required by the claims; and (3) whether one, some, or all of the electrode arrays can be ***selected*** to the impedance analyzer. Axion's proposed construction does not address any of these aspects and instead improperly attempts to limit the scope of the terms to only one embodiment from the specification.

First, with respect to "electronic circuitry capable of engaging said device" and "electronic circuitry that can engage said device" in the disputed terms, the specification makes clear that such ***engagement*** must be both physical and electrical, as clarified in Agilent's proposed construction:

> Appropriate electronic connection means such as ***metal clips engaged onto the connection pads*** on the substrate and connected printed-circuit-boards can be used

> for ***leading the electronic connections from the connection pads on the devices*** to external electronic circuitry (e.g. an impedance analyzer).

Ex. 1, 20:6-11.

> The ***metal clips (209) are engaged onto connection pads*** (204) on the substrate and are soldered to the connection lines (210) on the printed-circuit-board (208). The connection lines (210) on the printed-circuit-board (208) in turn ***are connected to the connection pins*** (211) located on the edge of the device.

Id., 21:66-22:4.

As explained above, in the specification, the engagement must be physical to maintain alignment of the electrical connections. However, because the claimed "engagement" of the device is accomplished through the claimed "electronic circuitry" further clarification on how to properly engage the electronic circuitry to the device is needed. The specification highlights this concept of both the physical and electrical engagement by explaining that proper engagement requires an electrical connection being formed (e.g., light goes on) while underscoring use of electrical devices that are capable of physical engagement (e.g., sockets, pins):

> When a device is ***properly engaged*** with the device station, ***a light*** (418) ***will be on*** because the light indicator (418) will be connected through circuit lines on the PCB of the device to an electrical power source.

Id., 24:17-20.

> The one or more platforms or one or more slots can comprise ***sockets, pins or other devices*** for ***electrically connecting*** the device to the device station.

Id., 23:36-39; *see also id*. at 18:6-11, 22:19-30, 24:25-34, FIG. 4, FIG. 5.

Second and third, with respect to "***selecting*** and ***connecting*** electrode arrays within any of the multiple wells to the impedance analyzer" and "***selectively connect*** said two or more electrode arrays of said device to said impedance analyzer," the specification makes clear that (a) the connection formed between the electrode arrays and the impedance analyzer is an electrical one; and (b) individual arrays can be connected to the impedance analyzer such that "one, some, or all

of the arrays" arrays can be selected for monitoring:

> The device station ***can connect individual arrays*** of a device to an impedance analyzer ***to monitor one, some, or all of*** the arrays of a device for a measurement time point.

Ex. 1, 23:57-60. Axion's construction conflates the limitations of (1) "connecting" to the impedance analyzer and (2) "selecting" the arrays limitations by focusing only on how the arrays are connected and then improperly extending that concept to how they are selected. As a result, Axion's construction improperly limits the selection of the arrays to a selection of only "one" array and omits the selection of "some, or all" arrays in direct contradiction to the specification quoted above. *Id*.

2. Defendant's Answering Brief

Plaintiff seeks construction of these two similar phrases that appear in the independent claims of the '752 and '080 patents. There is no dispute that the device station's electronic circuitry must be capable of engaging the multi-well device. The claim says that. Rather, the parties' dispute is focused on the second part of these claim phrases—that is, "electronic circuitry is capable of …" (i) "selecting and connecting electrode arrays within any of the multiple wells to the impedance analyzer" ('080 claim 1) or (ii) "selectively connect[ing] said two or more electrode arrays of said device to said impedance analyzer" ('752 claims 11, 14 (via claim 1)).

The parties agree that claim phrases (i) and (ii) above have the same meaning, but disagree as to what the correct meaning is. Plaintiff's construction rewrites the claim to state that the electronic circuitry is capable of "selecting and connecting to one, some, or all" of the electrode arrays, suggesting that the electronic circuitry can select and connect multiple electrode arrays to the impedance analyzer simultaneously. But that is not what the specification describes.

The specification disclosure from which Plaintiff borrows the "one, some, or all" language explains that the device station's electronic circuitry is selecting and connecting individual electrode arrays to the impedance analyzer one at a time, **in succession**:

> The device station comprises electronic circuitry that can connect to an impedance monitoring device and an impedance analyzer and electronic switches that can switch on and off connections to each of the two or more electrode arrays of the multiwell devices used in the system. The switches of the device station are controlled by a software program. The software program directs the device station to connect arrays of the device to an impedance analyzer and monitor impedance from one or more of the electrode arrays. During impedance monitoring, the impedance analyzer can monitor impedance at one frequency or at more than one frequency. Preferably, impedance monitoring is performed at more than one time point for a given assay, and preferably, impedance is monitored at least three time points. **The device station can connect individual arrays of a device to an impedance analyzer to monitor one, some, or all of the arrays of a device for a measurement time point. The switches of the device station allow the selected individual arrays to be monitored in rapid succession for each desired monitoring time point.** Each monitoring time point is in fact a narrow time frame (for example from less than one second to minutes) of measurement in the assay during which impedance monitoring is performed. In some preferred embodiments of the present invention, the device station software is programmable to direct impedance monitoring of any of the wells of the device that comprise arrays at chosen time intervals.

('752 at 23:44-24:2 (emphasis added).) This makes sense given that the '752 and '080 claims also separately require that "each electrode array is individually addressed" (as discussed above for Term 4).

While the remaining specification disclosure of circuitry "selecting and connecting" to electrode arrays is sparse, it is consistent with the above passage. (*See, e.g.*, '752 at 22:65-23:3 ("system can be used to efficiently and simultaneously perform multiple assays by using circuitry of the device station to digitally switch from recording from measuring impedance over an array in one well to measuring impedance over an array in another well."), 62:29-32 ("device station … is capable of electronically switching any one of the wells to the sensor (impedance) analyzer for

impedance measurement."); *see also id.* at Abstract, 4:15-29, 16:18-29, 22:48-61, claim 2.) Axion's construction for Term 5 is consistent with the '752 and '080 patents' disclosures.

3. Plaintiff's Reply Brief

Axion fails to address two critical aspects of Agilent's proposed construction that clarify: (1) the type of ***engagement*** required by the claims; and (2) the type of ***connection*** required by the claims. Ax. Br. at 37-39. Accordingly, these aspects of Agilent's construction and Agilent's related arguments remain unrebutted. *See* Pl. Br. at 35-37. Axion appears to only disagree with the aspect of Agilent's proposed construction that clarifies whether one, some, or all of the electrode arrays can be ***selected***. Ax. Br. at 37-39. But Axion improperly conflates the limitations of (1) "connecting" to the impedance analyzer, and (2) "selecting" the arrays, by focusing only on how the arrays are connected and then improperly extending that concept to how they are selected. Specifically, Axion attempts to read an "in succession" limitation into the claim. Ax. Br.at 37-39. But the "in succession" limitation is associated with a specific embodiment using switches, which Axion is now attempting to add to the claims through a second term. *See* Ax. Br.at 38 (referring to Term 4, where Axion also attempts include "switches"); Ex. 1, 23:60-62. Finally, Axion provides no argument in support of its construction beyond stating that "While the remaining specification disclosure of circuitry "selecting and connecting" to electrode arrays is sparse, it is consistent with the above passage." *Id.*; *see also Williams v. Netflix, Inc.,* C.A. No. 22-1132-CFC, 2023 WL 3478568, at *1 (D. Del. May 16, 2023); *Cano Arias v. AG of the United States*, 424 F. App'x 178, 181 (3d Cir. 2011) ("failure to present an argument … results in waiver").

4. Defendant's Sur-Reply Brief

Plaintiff insists that Term 5 should be construed so that the electronic circuitry must be capable of **selecting and connecting** to some or all electrode arrays simultaneously. (*See* Pl. Br. at 36-37; Reply at 39.) But no intrinsic evidence states that the device station's electronic circuitry

"selectively connects" (or "selects and connects") the impedance analyzer to more than one electrode array at a time. (*See* Ax. Br. at 37-39; '752 at 23:44-24:2, 22:65-23:3, 62:29-32.) The Court should reject Plaintiff's attempt to convert disclosure of "**monitor[ing]** one, some, or all of the arrays of a device" into the electronic circuitry "selecting and connecting" to multiple arrays simultaneously (as Plaintiff's construction appears to do). ('752 at 23:59 (emphasis added).) Indeed, later evidence confirms that Plaintiff's overly broad interpretation of Term 5 is incorrect. Plaintiff's U.S. Patent No. 11,906,508 (part of a subsequent patent family with some of the same inventors as the '752 patent) explains that "a very important improvement" over the patentee's earlier impedance-based systems "is to replace [*sic*] previous working mode of 'measurement of one-well's impedance at a time' with a mode of 'measurement of multiple-wells' impedances at a time.'" (Ex. 25 at 25:2-32; *see also id*. at 26:45-27:3.)

F. Term 6: "electrode array has an approximately uniform electrode resistance distribution across said electrode array so that the electrode resistances between two locations on said array do not differ by more than 30%" ('752 Patent, claims 11, 14) / "electrode array has an approximately uniform electrode resistance distribution across the entire array" ('255 Patent, claim 10)

Agilent's Proposed Construction	Axion's Proposed Construction
This claim phrase is not indefinite and should be construed as "electrode array where the path resistance through a selected point in the bottom of the well does not differ by more than approximately 30%, regardless of the selected point, when measured through the selected point either 1) between opposing connection pads or 2) between well-edge ends of opposing electrode structures"	Indefinite

1. Plaintiff's Opening Brief

Although Axion has yet to explain its indefiniteness position in detail, any suggestion that this limitation is indefinite is implausible. Where, as here, a term is amenable to a construction, it is not indefinite. *Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1373 (Fed. Cir. 2011) ("This court only finds claims 'not amenable to construction' or 'insolubly ambiguous' to be

indefinite."). Indeed, during prosecution, the Applicant overcame an indefiniteness rejection related to this term by way of a claim amendment, which is now afforded the presumption of validity. During prosecution of the '752 Patent, the Applicant overcame an indefiniteness rejection with an amendment. *See* Ex. 4 ('752 Patent File History, Response Dated Sep. 16, 2005, at 6); Ex. 5 ('752 Patent File History, Apr. 10, 2006 Resp.), at 7-8; Ex. 6 ('752 Patent File History, July 24, 2006 Resp.), at 8. This history was cited in the later issued '255 Patent, where the Examiner did not issue an indefiniteness rejection. Ex. 3, "Related Application Data."

a. Agilent's proposed construction clarifies the meaning of the "approximately uniform electrode resistance" consistent with the specification and the prosecution history.

The specifications explicitly define "uniform resistance distribution across the array:"

> By "uniform resistance distribution across the array" is meant that when a measurement voltage is applied across the electrode structures of the array, the electrode resistance at any given location of the array is approximately equal to the electrode resistance at any other location on the array.

Ex. 1, 16:32-36; *see also* Ex. 3, 25:4-11. The specifications then go on to explain what it means to have an "***approximately*** uniform electrode resistance distribution across the entire array:"

> Each electrode array of the device has an approximately uniform electrode resistance distribution across the entire array. … Preferably, the electrode resistance at a first location on an array of the device and the electrode resistance at a second location on the same array ***does not differ by more than 30%***. More preferably, . . . does not differ by more than 15%. Even more preferably, . . . does not differ by more than 5%. More preferably yet, . . . does not differ by more than 2%.

Ex. 1, 16:30-47; Ex. 3, 25:11-23. This description of the ***approximate*** uniformity places an upper boundary (i.e., 30%) on uniform resistance distribution alleviating any doubt of whether a particular resistance distribution is or is not within the scope of the term "***approximate*** uniform resistance distribution across the array." *Nelson v. K2 Inc.*, 2008 WL 2857020, at *4 (W.D. Wash. July 17, 2008) (holding the term "approximately" did not render the claim indefinite); *Imperium (IP) Holdings v. Apple Inc.*, 920 F. Supp. 2d 747, 763 (E.D. Tex. 2012) (same). Although this 30%

limitation was explicitly included as a limitation in the asserted claims of the '752 Patent in response to an indefiniteness rejection, the absence of this explicit limitation in the asserted claims of the '255 Patent does not render the corresponding term indefinite in light of the disclosure of an upper boundary in the specification and related prosecution history of the '752 Patent. *United Access Techs., LLC v. AT&T Corp.*, 757 F. App'x 960, 970-971 (Fed. Cir. 2019) (affirming district court's decision that patent claims were not indefinite where upper limit was not explicitly defined in the claim and intrinsic evidence made the term "reasonably clear"). The disputed term in the asserted claims of the '255 Patent, is not indefinite because its meaning is informed by the disclosure of an upper boundary (i.e., the 30%) in the specification as well the related prosecution history. *Id*.

b. Agilent's proposed construction clarifies the manner in which "approximately uniform electrode resistance" is determined.

In addition to clearly defining the meaning of the term "approximately uniform resistance distribution across the array," the specifications of the '752 and '255 Patents provide two methods of determining whether a particular resistance distribution across a given array is within the 30% upper boundary. The specification explains that the measurement of the path resistance through a point can either be: (1) between opposing connection pads, or (2) between well-edge ends of opposing electrode structures, as reflected in Agilent's construction:

> Based on this requirement, it is preferred to have an approximately uniform electrode resistance distribution across the whole array where the electrode ***resistance at a location of interest*** is equal to the sum of the electrode resistance between the ***nearest point on a first electrode structure*** (that is the point on the first electrode structure nearest the location of interest) ***and a first connection pad connected to the first electrode structure*** and the electrode resistance between the ***nearest point on a second electrode structure*** (that is the point on the first electrode structure nearest the location of interest) ***and a second connection pad connected to the second electrode structure***.

Ex. 1, 16:62-17:6; Ex. 3, 25:38-50; *see also* Ex. 1, 7:20-28, 18:18-20 ("Electrode structures shown

in FIG. 1C are designed to satisfy the requirement of approximately uniform electrode resistance."), FIG 1C; Ex. 3, 9:34-42, FIG 1C. The specification explains that the resistance is measured through a path that includes the "point of interest" and that it can either take into account the path between "a first connection pad" and a 'second connection pad," consistent with Agilent's proposed construction (referring to "connection pads"). *See, e.g.*, Ex. 1, FIG 1C and Ex. 3, FIG 1C (both showing "Connection pad 1" and "Connection pad 2" opposing each other). Alternatively, the path can be between the well-edge ends ("nearest point on a first electrode structure" and a "nearest point on a second electrode structure") of opposing electrode structures ("first electrode" and "second electrode"). Because the "point of interest" is on the array which is contained within the well (*see, e.g.*, Ex. 1, 16:59-17:6; Ex. 3, 25:36-50), the path resistance is measured from the well-edge of one electrode structure, through the point, and then from the point through a second electrode structure to the ***well***-edge of the second electrode structure. Ex. 1, 7:20-28, 18:18-20, FIG 1C; Ex. 3, 9:34-42, FIG 1C; *see also* §§ III.A.1, III.B.1 *supra* (explaining location of each electrode array with respect to each well).

In sum, the disputed terms are not indefinite, and Agilent's constructions clarify their meanings by providing an upper limit and manner to calculate the resistance distribution.

2. Defendant's Answering Brief

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2.[13] The limitations in Term 6 fail to do so. "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the

[13] The version of 35 U.S.C. § 112 that applies to all three patents-in-suit is the one before the changes made by the America Invents Act. *See, e.g.*, *MTD Products Inc. v. Iancu*, 933 F.3d 1336, 1341 n.1 (Fed. Cir. 2019).

scope of the invention." *Nautilus*, 572 U.S. at 901.[14] "[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

***Term 6 in the '752 Patent*:** Focusing first on the '752 patent claims, the specification does not explain how to measure whether "the electrode resistances between two locations on said array do not differ by more than 30%," as recited in Term 6. As explained by Dr. Richard Fair, a skilled person would have multiple ways to measure the claimed difference, and the multiple measurement methods produce materially different results as to whether an electrode array would be within the scope of the claim. (*See* Fair at ¶¶ 53-76.) A POSITA is therefore not informed with reasonable certainty about the scope of the limitation, and the limitation is indefinite. *See, e.g.*, *Dow Chemical Co. v. Nova Chemicals Corp.*, 803 F.3d 620, 631, 634-35 (Fed. Cir. 2015) (finding "a slope of strain hardening coefficient greater than or equal to 1.3" indefinite because intrinsic record did not "provide required guidance" regarding which method to use where there were multiple available "methods leading to different results"); *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1344-45 (Fed. Cir. 2015); *Integra Lifesciences Corp. v. Hyperbranch Med. Tech., Inc.*, No. 15-819-LPS-CJB, 2017 WL 3331739, *2-5 (D. Del. Aug. 4, 2017) (discussing *Teva* extensively and finding two claim terms indefinite), *report and recommendation adopted*, 2017 WL 5172396, *3 (D. Del. Nov. 8, 2017).

[14] The Supreme Court in 2014 clarified the law on indefiniteness, explicitly rejecting the prior "insolubly ambiguous"/"not amenable to construction" standards cited erroneously by Plaintiff (Pl. Br. at 40). *See Nautilus*, 572 U.S. at 901, 911. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id*. at 908, 911. A person of ordinary skill in the art ("POSITA") in the technology of the patents-in-suit would have had a degree in electrical engineering, physics, mechanical engineering, biomedical engineering, or a closely related field, plus at least 2 years of experience researching or developing devices for analyzing cells and for conducting cell-based assays, or an advanced degree in one of those fields in lieu of such work experience. (Fair at ¶ 25.)

The '752 specification's lone guidance about the 30% difference appears in the paragraph beginning at 16:30 of the specification:

> Each electrode array of the device has an approximately uniform electrode resistance distribution across the entire array. By "uniform resistance distribution across the array" is meant that when a measurement voltage is applied across the electrode structures of the array, the electrode resistance at any given location of the array is approximately equal to the electrode resistance at any other location on the array. **Preferably, the electrode resistance at a first location on an array of the device and the electrode resistance at a second location on the same array does not differ by more than 30%.** More preferably, the electrode resistance at a first location on an array of the device and the electrode resistance at a second location on the same array does not differ by more than 15%. Even more preferably, the electrode resistance at a first location on an array of the device and a second location on the same array does not differ by more than 5%. More preferably yet, the electrode resistance at a first location on an array of the device and a second location on the same array does not differ by more than 2%.

('752 at 16:30-47 (emphasis added).) The specification says nothing more about how to assess whether resistances at two locations do not differ by more than 30%. (*See* Fair at ¶¶ 54-56, 62.) And when adding the 30% difference language to the '752 claims during prosecution, the patentee just pointed to this single specification sentence as providing support for the claim amendment, and said nothing more. (*See* D.I. 82-6 at AGILE0000297-298; Fair at ¶¶ 71-75.)

In contrast to the specification's lack of explanation regarding the 30% difference, the specification does provide a description and formulas for calculating the resistance at locations on an electrode array, with reference to the patent's Figure 1C. ('752 at 17:43-18:2; Fair at ¶¶ 57-62.) The specification explains that the formulas for determining electrode resistance at location A and location B on the electrode array in Figure 1C are:

$$R_{location\_A} = R_{trace1} + R_{1\text{-}to\text{-}A1} + R_{A1\text{-}to\text{-}A} + R_{A\text{-}to\text{-}A2} + R_{A2\text{-}to\text{-}2} + R_{trace2} \quad (1)$$

$$R_{location\_B} = R_{trace1} + R_{1\text{-}to\text{-}B1} + R_{B1\text{-}to\text{-}B} + R_{B\text{-}to\text{-}B2} + R_{B2\text{-}to\text{-}2} + R_{trace2} \quad (2)$$

('752 at 17:56-63; *see also* Fair at ¶¶ 58-61.) Figure 1C is reproduced below with color annotations showing the electrical resistance segments for location A that are described by formula (1) (in yellow) and the electrical resistance segments for location B that are described by formula (2) (in blue). (Fair at ¶ 61.)

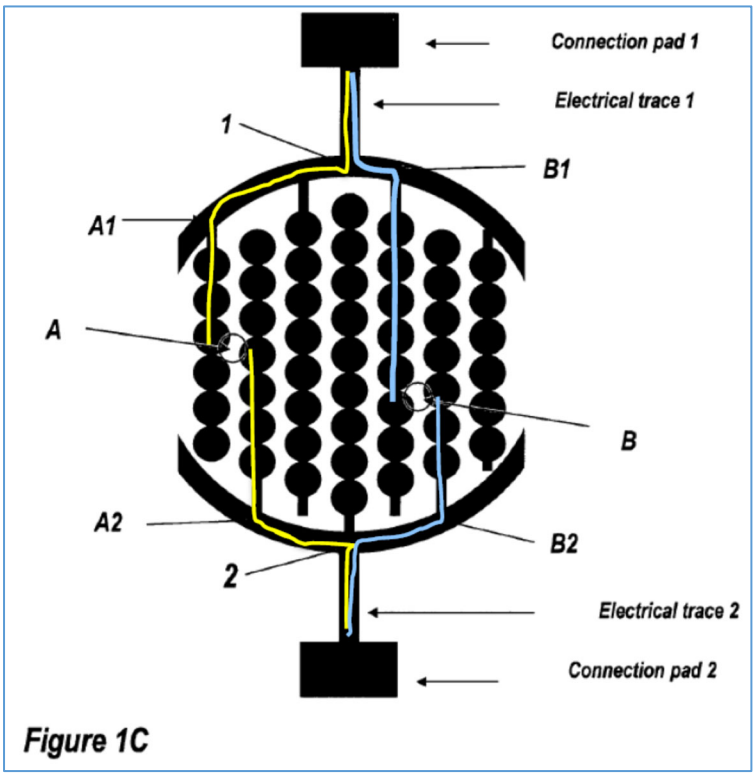


Figure 1C

To be clear, the patentee's two formulas merely add the serial resistance of the various metal films (or the like) that form each electrical trace, each portion of electrode bus, and each portion of connected electrode element along a route from connection pad 1 to connection pad 2 that passes through location A (or location B), ignoring the resistance of the space or gaps between the interdigitated electrode elements. (Fair at ¶¶ 59-61.)

Even with resistances measured at locations A and B in hand, the intrinsic record fails to provide sufficient information about how to measure whether the resistances at two locations "do not differ by more than 30%," as claimed. (Fair at ¶¶ 62-76.) As Dr. Fair explains, (i) a POSITA

would have been aware of multiple options for measuring the claimed 30% difference, and (ii) the multiple options for measuring the % difference in resistances would lead to materially different results as to whether an electrode array is within the scope of the claim. (Fair at ¶¶ 63-67.)

In one example Dr. Fair provides, $R_{location\_A}$ is 80 Ohms and $R_{location\_B}$ is 110 Ohms. (Fair at ¶¶ 63-65.) A skilled person could measure whether the resistances at these two locations differ by no more than 30% in at least the following two ways:

- Determine whether $R_{location\_A}$ is within 30% of $R_{location\_B}$. Here, 80 Ohms **is** within 30% of 110 Ohms (110 Ohms ±30% includes a range of 77-143 Ohms). The difference in resistance in percentage terms is 27.27%.
- Determine whether $R_{location\_B}$ is within 30% of $R_{location\_A}$. Here, 110 Ohms **is not** within 30% of 80 Ohms (80 Ohms ±30% includes a range of 56-104 Ohms). The difference in resistance in percentage terms is 37.5%

(Fair at ¶¶ 64-65.) Measuring the 30% difference using these two alternative methods leads to materially different results—in the first case, the electrode array is within the scope of the claim, and, in the second case, the same electrode array is outside the scope of the claim. (Fair at ¶¶ 64-65, ¶ 66 (additional example).) The limitation "that the electrode resistances between two locations on said array do not differ by more than 30%" is thus indefinite. *See, e.g.*, *Dow Chemical*, 803 F.3d at 634-35; *Teva*, 789 F.3d at 1344-45.

There is also a third possibility, that a POSITA could interpret the claimed 30% difference to indicate a window or range around a desired (or designed) resistance of the electrode array (*i.e.*, the resistance at every location on the array is ±15% from the desired resistance, providing a 30% window/range of acceptable variance for the electrode resistance distribution to be "approximately uniform" as claimed). (*See* Fair at ¶¶ 67-68.) And further ambiguity exists in Term 6 regarding whether it is claiming the resistance at every location, or just "two locations." This matters because the claim limitation requires "approximately uniform electrode resistance distribution **across said electrode array**" [i.e., at all locations] "so that the electrode resistances **between two locations**

on said array do not differ by more than 30%." ('752 at 70:66-71:3 (emphases added); *see* Fair at ¶¶ 69-70; *see also* '752 at 16:30-36 ("resistance at any given location … approximately equal to … resistance at any other location …"), 17:7-14 ("resistance at any single location … is approximately equal to the resistance at any single other location …").)

For the above reasons, Term 6 in the '752 patent is indefinite.

***Plaintiff's Construction Creates Further Ambiguities*:** Plaintiff's construction only reinforces that Term 6 is indefinite; the construction (i) offers no guidance as to how to measure the claimed 30% difference, (ii) adds an alternative option for measuring "path resistance" that is not supported by the specification (Plaintiff's "well-edge ends" option 2); and (iii) seeks to muddy the limitation's boundaries by rewriting the limitation to say "approximately 30%."

First, nothing in Plaintiff's construction addresses how to measure whether resistance differs by more than 30% between two locations on the electrode array. In addition, Plaintiff's construction states "resistance through a selected point" but then provides no indication of what the resistance of "the selected point" is even being measured against with respect to the claimed difference. (*See* Fair at ¶¶ 77, 86.)

Second, Plaintiff does not explain its "between well-edge ends" option for measuring "path resistance." (*See* Pl. Br at 41-42.) Plaintiff relies on 16:62-17:6 of the specification, but that passage does not mention "well-edge ends." (*See* '752 at 16:62-17:6.) In fact, that passage describes a path from the first connection pad to the second connection pad (just like the formulas Axion discussed above). (*See id.*; Fair at ¶¶ 78-83.)

Third, the claim language in Term 6 states "30%," not "approximately 30%" as in Plaintiff's construction. The specification does not support "approximately 30%" or provide any guidance to the POSITA about what variance from 30% is permitted to remain within the scope

of the claim. (*See* '752 at 16:37-39; Fair at ¶¶ 84-85.)

***Term 6 in the '255 Patent*:** Plaintiff's construction for this limitation is the same as for Term 6 in the '752 patent, even though dependent claim 10 of the '255 patent lacks the explicit language in the '752 claims stating "that the electrode resistances between two locations on said array do not differ by more than 30%." (*See* '255 at 100:5-7; '752 at 70:66-71:3.) Plaintiff argues that the '752 claims' explicit numerical limitation is **implicitly present** in '255 dependent claim 10 because of the specification disclosure and the '752 file history. (*See* Pl. Br. at 42-43.)[15]

Plaintiff's position effectively concedes that Term 6 in the '255 patent is indefinite unless one reads in the '752 patent's numerical limitation. Of course, the problem with reading in the '752 patent's numerical limitation is that the '752 limitation is indefinite, as Axion just explained. Thus, Term 6 in the '255 patent, as Plaintiff interprets it, is indefinite for at least the same reasons as Term 6 in the '752 patent. (*See* Fair at ¶¶ 95-96.) Even absent Plaintiff's concession, claim 10's broader limitation is indefinite because a POSITA would not be informed, with reasonable certainty, of the scope of the limitation. (*See* Fair at ¶¶ 92-94.)

3. Plaintiff's Reply Brief

Axion bears the burden of proving indefiniteness, i.e., that the scope of the claim could not have been ascertained by a POSITA with reasonable certainty, by clear and convincing evidence. *Custom Accessories, Inc. v. Jeffrey-Allan Indus.*, 807 F.2d 955, 961 (Fed. Cir. 1986). Axion failed to do so. During meet and confer, Axion contended that Term 6 renders claims incorporating that term indefinite and that Agilent's proposed construction did not cure that alleged defect. When Agilent asked why, Axion's entire assertion was that a POSITA would not have understood how

[15] The '255 patent specification does not add anything to the '752 patent's disclosure that is relevant to Term 6. (*See, e.g.*, '255 at 2:49-52, 4:49-51, 8:10-12, 25:4-26:20; Fair at ¶¶ 88-89.) And there is no relevant '255 file history. (*See generally* D.I. 82-16 (the '255 and '752 patents also had different examiners); Fair at ¶¶ 90-91.) Plaintiff does not suggest otherwise.

to measure resistance at particular location on the electrode array.[16] Yet, Axion's own expert has explained how the resistance at a location can be determined—by measuring and adding the resistances of the traces, busses, and electrode structures between the location and the connection pads. Ax. Br.at 44; Fair ¶ 61. Agilent and its expert, Dr. Frazier, agree.[17] Accordingly, Agilent has revised its proposed construction to reflect this agreement. *See* Frazier ¶¶ 66-71.

Axion has pivoted to several manufactured arguments to try to show indefiniteness. None succeed. First, Axion tries to create an issue as to whether, when determining the resistance at a location on an electrode array, Agilent's proposed construction is intended to include the resistance of the gap between electrode structures at that location.[18] Ax. Br. at 52-53; *see also* § III.B.3, *infra*. Agilent does intend to include the resistance of the gap, as indicated in Agilent's opening brief. Pl. Br. at 42-43 (citing Ex. 1, 16:62-17:6; Ex. 3, 25:38-50); Frazier ¶¶ 69-70. To avoid all doubt, Agilent has amended its construction to explicitly exclude the resistance of any the gap.

Axion also argues that Agilent's reference to a "selected point" on an electrode array, rather than a "location" on the electrode array in its construction is inaccurate.[19] Ax. Br. at 48; Fair ¶ 86. Agilent disagrees because the claims require calculating the percentage difference between two locations on the array (Pl. Br. at 41-42; Frazier ¶¶ 75-79), to remove yet another issue manufactured by Axion, Agilent's revised its construction to refer to a "location," rather than a "point."

In sum, to narrow disputes and add clarity, Agilent has amended its proposed construction

[16] Axion refused to provide an alternative construction for this term.
[17] Agilent originally also proposed that, alternatively, the resistance could be measured from well edges of electrode structures, but this is a special case already captured by measurement between connection pads (omitting the gap) and need not be included in the construction.
[18] Axion did not raise this issue during the meet and confer process.
[19] *See* n.18, *supra*.

by: (1) simplifying the explanation of the method of determining resistance at a location on an electrode array; (2) explicitly clarifying that the gap resistance should be excluded in any such determination; and (3) replacing any reference to a "point" with a reference to a "location." Agilent's revised construction is provided below:

> "electrode array where the difference between resistances for two selected locations on the bottom surface of the well is not greater than 30%, regardless of the selected location, when resistance at a selected location is measured from one connection pad to the selected location and from the selected location to an opposing connection pad, excluding the gap between electrode structures of the electrode array"

As a last resort, Axion manufactures yet another indefiniteness argument by ignoring the plain language of the claim, which is clearly directed to a percentage **difference** between two values ("resistances **between** two locations . . . **do not differ** by more than **30%**"),[20] and not, as Axion argues, to a percentage **change** from one value to another[21] (Ax. Br. at 46-48; Fair ¶¶ 63-67). Frazier ¶¶ 75-84. Axion's reliance on the wrong mathematical concept (percentage **change**) is specious, as Axion, and its expert repeatedly refer to the 30% limitation in the context of a "**difference**."

Moreover, Axion and its expert never tell the Court that they are actually calculating percentage change, instead representing that they are calculating a percentage difference (as called for by the claims). Axion also implausibly argues that the specification does not provide any guidance on how to calculate the claimed percentage difference—a mathematical calculation well known in the art. Ax. Br.at 52 (citing Ex. 1, 16:30-47); Frazier ¶¶ 73-78; *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369, 1376 (Fed. Cir. 2017) ("A patent need not

[20] This language appears explicitly in claim 1 of the '752 Patent, from which claims 11 and 14 depend. However, in light of the prosecution history, the "approximately uniform resistance distribution across [an] electrode array" limitation of claim 10 of the '255 Patent carries the same meaning. *See* Frazier ¶¶ 58-65.

[21] Again, Axion did not identify this as a basis for its indefiniteness during the meet and confer.

explicitly include information that is already well known in the art."). A POSITA would have known the difference between the basic mathematical concepts of "percentage difference" and "percentage change," would have understood that the "percentage difference" is the correct concept and the simple way to calculate "percentage difference." Frazier ¶¶ 75-81.

Both Term 6 terms have the same meaning in view of the specification and prosecution history. The '752 and the '255 Patents define "electrode resistance distribution" and set an upper limit of 30% difference as satisfying "approximately uniform electrode resistance distribution." Pl. Br. at 40-42; Ex. 1, 16:30-47; Ex. 3, at 25:11-23; *see also* Frazier ¶¶ 58-65. The '752 Patent prosecution history further establishes that a POSITA would have understood "approximately uniform electrode resistance distribution" in '255 Patent claim 10 to mean that "the electrode resistances between two locations on [the] array do not differ by more than 30%." Pl. Br. at 48 (citing D.I. 82-at 4, D.I. 82-5, at 7-8, D.I. 82-6, at 8); *see also* Frazier ¶¶ 61-65.

Axion argues that the 30% upper limit should not be included in the claims of the '255 Patent (Ax. Br. at 48-49) but ignores that the '752 Patent prosecution history provides a basis for understanding the meaning of "approximate electrode resistance distribution." It is well established that "the prosecution history regarding a claim term is pertinent when interpreting the same term in both later issued and earlier-issued patents in the same family." *Capital Mach.*, 524 F. App'x at 649 (citing *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004)); *see also Biovail Corp.*, 239 F.3d at 1301 ("When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.").

The '752 and the '255 Patent specifications disclose how to measure resistance at a location on an electrode array. Agilent and Axion rely on the same portion of the specifications

and figures regarding measuring electrode resistance at a location on an electrode array. *See* Pl. Br. at 42-43; Frazier ¶¶ 66-69; Ax. Br. at 45-46 (citing Fair ¶¶ 57-61). The parties also rely on the same equations disclosed in the specifications:

$$R_{location\_A}=R_{trace1}+R_{1\text{-}to\text{-}A1}+R_{A1\text{-}to\text{-}A}+R_{A\text{-}to\text{-}A2}+R_{A2\text{-}to\text{-}2}+R_{trace2} \quad (1)$$

$$R_{location\_B}=R_{trace1}+R_{1\text{-}to\text{-}B1}+R_{B1\text{-}to\text{-}B}+R_{B\text{-}to\text{-}B2}+R_{B2\text{-}to\text{-}2}+R_{trace2} \quad (2)$$

Ex. 1, 17:56-63; *see* Pl. Br. at 42-43; Frazier ¶¶ 69,85; Ax. Br.at 45-46; Fair ¶¶ 58-61.

First, the parties agree that determining the resistance at a location on an electrode array should not include the resistance of the gap between electrode elements at that location. Fair ¶ 60; Frazier ¶¶69-70.

Second, based on Axion's assertion concerning Term 6 during the meet and confer process that the patents do not disclose the methods for determining resistance at a location on an electrode array, Agilent proposed a construction providing two methods of doing so. Pl. Br.at 42-43. Axion now has agreed with the first method (other than Axion's manufactured argument about including gap resistance) but disputed the second method. Ax. Br. at 45-46; Fair ¶79. Agilent's revised construction reflects only the first method (on which parties agree). *See* Frazier ¶¶ 70-71 (explaining that a POSITA would understand that the resistance at a location on an electrode array is "measured from one connection pad to the selected location and from the selected location to an opposing connection pad, excluding the gap between electrode structures of the electrode array.").

Axion's agreement that the first method is correct defeats its indefiniteness argument. *See* Ax. Br. at 44. The Federal Circuit has rejected similar indefiniteness arguments where the patent specification identified at least one method of measurement or technique. *Takeda Pharm. Co. v. Zydus Pharms. USA, Inc*., 743 F.3d 1359,1366-1367 (Fed. Cir. 2014) (holding that existence of multiple measurement techniques disclosed in the patent were not sufficient to render the claim

indefinite.). Courts in Delaware have come to similar conclusions. *See W.L. Gore & Assocs. v. C.R. Bard, Inc*., No. 11-515-LPS, 2015 U.S. Dist. LEXIS 134312, at *11-12 (D. Del. Sep. 28, 2015) (defendants failed to prove indefiniteness where "the specifications of the patents-in-suit provide guidance as to how to perform the measurement at issue"); *Astellas Pharma Inc. v. Actavis Elizabeth LLC*, No. 16-905-JFB-CJB, 2018 U.S. Dist. LEXIS 106117, at *37-38 (D. Del. June 18, 2018) (claim not indefinite where the specification clearly explained the terms at issue). Moreover, Axion's citation to *Dow Chemical* is inapposite. There the Court noted that there were four different methods to determine the maximum slope on a curve and "[n]either the patent claims nor the specification here discusses the four methods or provides any guidance as to which method should be used or even whether the possible universe of methods is limited to these four methods." *Dow Chemical Co. v. Nova Chemicals Corp.*, 803 F.3d 620, 631, 634 (Fed. Cir. 2015). Here, the parties agree that the specification discloses a method of measuring resistance at a location on an electrode array. Similarly, there is only one method to calculate the percentage difference between two resistances. For Axion to argue that there are two "methods" by pointing to two results of using the wrong mathematical equation (percentage change instead of percentage difference) by ignoring how percentage difference **between** two values works altogether and creating an absurd example by using the wrong method to go from "A" to "B" and then from "B" to "A") is disingenuous, because there is no order to selecting two locations on an array. Frazier. ¶ 79.

Plain language of the claims requires calculating (not measuring) percentage difference. Axion manufactured yet another alleged ambiguity in Term 6. Some explanation is important for context. The claim states that "… the electrode resistances between two locations on said array do not **differ** by more than 30%." Ex. 1, Cl. 1. That means the following. First, electrical resistance at any location in the array can be measured (for example, at locations A and B). Frazier

¶ 72-78. Second, a calculation — a percentage **difference—**should be performed between the values measured at A and B to determine whether the difference between those two values is more than 30%. Frazier ¶¶ 75-76. Axion, instead, takes what is straightforward and attempts to inject ambiguity.

First, Axion confuses the **measurement** of the resistances at two locations with the **calculation** of the 30% **difference** between those measured values. Axion argues that "the specification does not explain how to **measure** whether 'the electrode resistances between two locations on said array do not differ by more than 30%,'" "a skilled person would have multiple ways to **measure** the claimed **difference**, and the multiple **measurement** methods produce materially different results as to whether an electrode array would be within the scope of the claim." Ax. Br. at 44 (emphasis added). But Axion's expert, Dr. Fair, and Agilent's expert, Dr. Frazier agree that the patent discloses one method of **measuring** the **resistance** at a given location on an electrode array—by summing the resistances of the segments between the location and each of the connection pads. Fair ¶ 61; Frazier ¶ 69; *see also* Ex. 1, 16:62-17:6; Ex. 3, 1:18-30 (incorporating by reference the disclosures of the '752 Patent). Resistances at two locations can be determined this way. Frazier ¶¶ 66-69. And then, the percentage difference between the resistances at the two locations can be **calculated**—not measured. Frazier ¶¶ 72-78. Calculation of percentage the difference is simple, and there can be no confusion about how it is to be performed.

Yet, and second, Axion attempts to inject ambiguity into how the difference in resistance values at locations A and B is calculated. Ax. Br. at 54; Fair ¶¶ 64-65. The claim calls for how the values "differ," not how they "change." Ex. 1, Claim 1; Frazier ¶¶ 72-79. The claims require determining the **percentage difference** between two numbers, and there are no temporal or directional aspects, *i.e.*, it does not matter whether one starts with A or B—the percentage

difference is the same. Frazier ¶¶ 72-79. A POSITA would have known how to determine the percentage difference between two values—it is a simple calculation made by taking the absolute value[22] of the difference between two numbers, dividing by the average of the two numbers, and multiplying by 100 to get a percentage. Frazier ¶¶ 77. The result is the same whether one starts with A or B. Frazier ¶¶ 78. Faced with this mathematical reality, Axion argues that there is more than one way to determine the percentage difference. Ax. Br. at 47; Fair ¶¶ 64-65. But that is entirely incorrect, because Axion erroneously attempts to support its position with formulas for calculating **percentage change,** not **percentage difference**. Frazier ¶¶ 79-83. Percentage difference (which the patent claims) is the relationship between two numbers, while percentage change is how much the second value has changed with respect to the first value. Frazier ¶¶ 79-83.

A simple example, with resistance measurements of 100 Ohms at location "A" and 20 Ohms at location "B" explains the error that Axion attempts to inject. Frazier ¶¶ 78-85. To calculate the percentage difference between the resistances at locations "A" and "B", the calculation is: (a) take the absolute value of A-B; (b) divided that absolute value by the average of A and B; and (c) multiply the result by 100 to express the result in percentage form. Here that would calculate to: (absolute value of 100-80) divided by (the average of 100 and 8) and multiplied by 100 = (100-80) divided by (100+80)/2) and multiplied by 100 = (20 / 90) * 100 = **22.2%**. The result would be the same if were to calculate the percentage difference between locations "B" and "A" (i.e., if the values were reversed): (the absolute value of 80 and 100) divided by (the average

[22] Absolute value is the absolute amount of difference between two numbers and, if the difference is anything other than zero, always is expressed as a positive number. The absolute value of 5 -3 is 2, and the absolute value of 3 -5 also is 2. This is well established, simple mathematics. Frazier ¶¶ 72-78.

of 80 and 100) and multiplied by 100 = (20 / 90) *100 = 0.222 = **22.2%**. Frazier ¶¶ 77.

However, by Axion's methodology, the results, unsurprisingly, differ, depending on whether location "A" or location "B" is the starting point because Axion calculates percentage **change** (a directional concept)—not percentage difference. Under Axion's erroneous methodology, when starting at location "A" with a value of resistance of 100 Ohms, and then computing a percentage difference of at location "B" with a value resistance of 80 Ohms, the percentage difference at location "B" with respect to location "A" would be: (B – A) divided by A, and multiped by 100 to express the result in % form. (Ax. Br. at 54; Fair ¶¶ 64-65). Here, that would calculate to: ((80 - 100) divided by 100) multiplied by 100 to express as a percentage = (-20 divided by 100) multiplied by 100 = (negative 0.20) multiplied by 100 = **negative 20%.** Frazier ¶¶ 79-80. By Axion's method, if we started with location "B" (and calculated a percentage change at location "A," with respect to location "B," the calculation would be: (100 minus 80) divided by 80) multiplied by 100 to express as a percentage = (20 divided by 80) multiplied by 100 = 0.25 multiplied by 100 to express as a percentage = **positive 25% –** a different result by the virtue of the type of calculation being perform – one that is inapposite in the context of measuring the percentage difference between two numbers. Frazier ¶¶ 79-80.

This is significant because the claim language at issue requires that the difference in resistance measurement taken at two different points on the array does not exceed 30%. Frazier ¶¶ 72-75. In contrast, Axion's methods calculate a percentage change where the mathematical result is different depending on whether one starts at location A or location B. Frazier ¶¶ 79-80. But a POSITA designing the electrode array of the present invention would understand that the 30% tolerance is a comparison between values at two locations and not a calculation of change from one to another is called for by the claims. Frazier ¶¶ 72-79. Accordingly, Axion's allegation

that the methods of calculation the claimed difference produce inconsistent result is unsupported because it relies on the wrong mathematical concept in direct contradiction to the specification.

4. Defendant's Sur-Reply Brief

Plaintiff's identification of yet another method for determining whether the resistances at two locations on an electrode array "do not differ by more than 30%" proves Axion's point—Term 6 in the '752 patent is indefinite because a POSITA would have known of multiple methods to determine whether resistances do not differ as claimed; the intrinsic record does not identify which method to use; and the multiple methods produce materially different results as to whether an electrode array would be within the scope of the claim. *See, e.g.*, *Dow Chemical Co. v. Nova Chemicals Corp.*, 803 F.3d 620, 630-31, 634-35 (Fed. Cir. 2015); *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1344-45 (Fed. Cir. 2015).

Plaintiff tries to distinguish the relevant Federal Circuit authority by arguing that there is only one way to calculate a "percentage difference" because any other calculations of difference in values are instead "percentage change" that a POSITA would not use to calculate a difference. (*See* Reply at 54-57.) But Dr. Frazier cites no evidence that his preferred calculation is the only known approach a POSITA would have used to determine whether two resistance values do not differ by a specified percent. (*See* Frazier at ¶¶ 72-78.) Nothing in the intrinsic record points to any specific formula or method, or uses the phrase "percentage difference" that Dr. Frazier says signals that his preferred calculation is the lone acceptable method. *See Dow Chemical*, 803 F.3d at 630 ("the patent and prosecution history must disclose a single known approach or establish that, where multiple known approaches exist, a person having ordinary skill in the art would know which approach to select") (citing *Teva*, 789 F.3d at 1341, 1344-45).[23] Moreover, Dr. Frazier's

[23] Plaintiff elsewhere cites *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369 (Fed. Cir. 2017) in support of its argument, but in *Presidio* "the general approach was sufficiently

exemplary calculations confirm Dr. Fair's testimony in two important respects: (i) there are different ways to calculate whether two values differ by a specified percent (*see* Frazier at ¶¶ 77, 80; Fair at ¶¶ 63-67); and (ii) those different ways lead to materially different results (*see id*.).

In addition, it is unclear whether Term 6 requires approximately uniform resistance "across said electrode array" (*i.e*., at all locations on the array) or only at "two locations on said array." (*See* Ax. Br. at 47-48; Fair at ¶¶ 69-70.) Plaintiff's expert opines that it is the latter. (*See* Frazier at ¶¶ 58-59, 61-62, 82-84.) To do so, he relies on the '752 prosecution's addition of the numerical limitation and his parsing of the specification text at 16:30-39 to assert that (a) the highlighted middle sentence below defines "**uniform** resistance distribution across the array," while (b) the first and third sentences define "**approximately uniform** resistance distribution across the array":

> Each electrode array of the device has an approximately uniform electrode resistance distribution across the entire array. By "uniform resistance distribution across the array" is meant that when a measurement voltage is applied across the electrode structures of the array, the electrode resistance at any given location of the array is approximately equal to the electrode resistance at any other location on the array. Preferably, the electrode resistance at a first location on an array of the device and the electrode resistance at a second location on the same array does not differ by more than 30%.

('752 at 16:30-39 (highlighting added); *see* Frazier at ¶¶ 58-59, 61-62.) The specification and file history, however, are inconsistent with Dr. Frazier's opinion, and, in particular, he fails to address the patentee's file history arguments that (i) multiple prior art electrode arrays having "a variety of resistances across the array" are not "approximately uniform"; and (ii) "[a]pproximate uniform electrode resistance would ensure the electrical field applied to an individual cell is consistent across the array." (D.I. 82-5 at AGILE0000313-314, AGILE0000318-319; *see* Frazier at ¶¶ 54, 61; *see also* '752 at 16:30-39, 16:48-17:26; Fair at ¶¶ 54-57, 68-70, 72-73.) Plaintiff's expert's

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well established in the art and referenced in the patent to render the claims not indefinite." *Id*. at 1377. Such is not the case here.

tortured reading of Term 6 is further evidence that this term falls short of "the definiteness requirement's public-notice function" and instead "foster[s] the innovation-discouraging 'zone of uncertainty,' against which this [Supreme] Court has warned." *Nautilus, Inc. v. Biosig Instruments, Inc*., 572 U.S. 898, 911 (2014) (internal citation omitted).

Plaintiff also sows further confusion by erroneously suggesting that Axion undercut its indefiniteness position by agreeing with part of Plaintiff's construction. (*See* Reply at 52-54, 50 n.17.) The reality is that Plaintiff dropped its "between well-edge ends" theory for measuring resistance (its option (2)) from its initial construction after realizing there was no evidentiary support for it.[24] (*See* Fair at ¶¶ 80-81; Ax. Br. at 48.) To be clear, Axion is not suggesting that parties may not modify their constructions during briefing as issues develop and disputes crystallize. But Plaintiff's difficulty understanding the scope of Term 6 and Plaintiff's multiple, significant revisions to its construction are telling. (*See* Reply at 49-51.)

Finally, Plaintiff confirms its view that Term 6 in the '255 patent's dependent claim 10 rises and falls with Term 6 in the '752 patent. (Reply at 52.) But Term 6 is not the same in '255 claim 10 and the '752 claims. The patentee added the 18-word numerical limitation ("so that the electrode resistances … 30%") to the '752 claims in a July 2006 claim amendment, and this 18-word limitation is not anywhere in the later-prosecuted '255 claims. (*See* D.I. 82-6 at AGILE0000292; D.I. 82-16.) Certainly, the '752 file history is relevant—*e.g.*, as evidence that Term 6 in '255 claim 10 is indefinite for at least the same reason the Patent Office initially rejected the '752 claims—but neither the '752 file history nor any authority Plaintiff cites dictates amending '255 claim 10 to add the 18-word limitation that is not there.

[24] Plaintiff's characterizations of the parties' pre-briefing meet and confer are both irrelevant and inaccurate. Plaintiff provided its initial construction of Term 6 before the parties' January 5 meet and confer, so nothing Axion said during that conference informed Plaintiff's construction.

G. Term 7: "calculating cell index values" ('080 Patent, claim 1) / "calculating a cell index" ('752 Patent, claim 18) and Term 8: "cell index" ('255 Patent, claim 9)

Agilent's Proposed Construction	Axion's Proposed Construction
"cell index" is not indefinite and should be construed as "a parameter derived from measured impedance values that reflects a change in impedance values"	Indefinite
"calculating cell index values" and "calculating a cell index" are not indefinite and should be construed as "calculating parameters derived from measured impedance values that reflect a change in impedance values" and "calculating a parameter derived from measured impedance values that reflects a change in impedance values," respectively.	Indefinite

1. Plaintiff's Opening Brief

"Cell index" is not indefinite because, in view of the intrinsic record, a skilled artisan would understand "cell index" to mean "a parameter derived from measured impedance values that reflects a change in impedance values." Axion bears the burden of establishing indefiniteness by clear and convincing evidence. Axion's assertion during the meet and confer process that "cell index" is indefinite simply because the Asserted Patents disclose multiple ways of calculating a cell index fails. *See Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1347 (Fed. Cir. 2022) ("a claim is not indefinite just because it is broad.").

Agilent's construction is based on an explicit definition from the specification. The '255 Patent defines "cell index" as "a parameter that can derived from measured impedance values and that can be used to reflect the change in impedance values." Ex. 3, 22:32-34; *see also* Ex. 1, 24:57-64, Ex. 3, 30:60-67. "When a patentee explicitly defines a claim term in the patent specification, the patentee's definition controls." *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1380 (Fed. Cir. 2009). This explicit definition, alone, defeats Axion's indefiniteness argument. *See Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 705-06 (Fed. Cir. 1998) (finding claim term sufficiently definite because it was defined in the specification).

Moreover, Agilent's construction also is supported by the prosecution history of related applications, which emphasizes the importance of cell index as a parameter that "provides more information than mere shifts in impedance values." Ex. 9 at 26; Ex. 8 (App. No. 10/705,447, May 27, 2008 Resp.) at 36; *see also* Ex. 14 (App. No. 11/235,938, June 1, 2009 Resp.) at 14 ("cell index can reflect how many or how well cells are attached to electrode surfaces in the well").

In addition, the specification's disclosure of multiple ways to calculate a "cell index" does not render the term indefinite. For example, in *Geoscope Techs. Pte. Ltd. v. Google LLC*, the court found the claim term "characterizing parameters" was definite over the defendant's argument that the specification's list of embodiments failed to "establish the bounds" for the claim term. No. 1:22-cv-01331-MSN-JFA, 2023 WL 4627433, at *10 (E.D. Va. July 19, 2023). The court reasoned that, even though the specification disclosed a "non-exhaustive list" of embodiments, the "detailed explanation of exemplary parameters identification in the specification would allow a POSA to understand the scope of 'characterizing parameters' to be evaluated with reasonable certainty." *Id.* Likewise, here the specification provides substantial non-exhaustive examples of how to derive a "cell index" from measured impedance values: the section titled "Methods for Calculating Cell Index" spans over a dozen columns in the patents (Ex. 1, cols. 24-38; Ex. 3, cols. 30-46) and discloses at least seven exemplary methods for calculating cell index. Ex. 1, cols. 27-30 (disclosing equations numbered A-G for calculating cell index); Ex. 3, cols. 33-36 (same). As in *Geoscope Techs.*, the detailed explanation of exemplary cell indices in the specification would allow a POSA to understand the scope of "cell index" to be evaluated with reasonable certainty. *Geoscope Techs.*, 2023 WL 4627433, at *10.

2. Defendant's Answering Brief

a. Term 7: "calculating cell index values" ('080 claim 1) / "calculating a cell index" ('752 claim 18)

Plaintiff states that its "construction is based on an explicit definition from the specification" and suggests this "alone" is dispositive. (Pl. Br. at 61.) Plaintiff is wrong. First and foremost, the definition of "cell index" that Plaintiff relies on is **from the '255 specification** (a grandchild CIP of the '752 patent), not the '080/'752 patents where the "calculating cell index values"/"calculating a cell index" limitations appear.

Second, Plaintiff's construction of "cell index" is not the '255 patent's definition, as Plaintiff omits ambiguous, permissive language from the '255 definition:

- Plaintiff's construction: "a parameter derived from measured impedance values that reflects a change in impedance values"
- '255 definition: "a parameter **that can** [*sic*] derived from measured impedance values and that **can be used to** reflect the change in impedance values"

(Pl. Br. at 61; '255 at 22:32-34 (emphasis added).) Plaintiff also omits the very next sentence in the '255 specification, which is important here: "There are a number of methods to derive or calculate Cell Index." ('255 at 22:34-35.)

Third, the alleged '255 definition of "cell index" is not really a definition at all. It is a vague statement with no boundaries. (*See* Fair at ¶¶ 153-155.) The '255 definition indicates "cell index" has some relationship with impedance values, but otherwise offers the POSITA no guidance. (*See* Fair at ¶¶ 136-138, 153-155.) And both it and Plaintiff's construction are at odds with the patentee's statements in the file histories that Plaintiff itself cites, where the patentee proclaimed multiple times that "the cell index provides more information than mere shifts in impedance values." (D.I. 82-8 at AGILE0060629 ('533 file history); D.I. 82-9 at AGILE0063171 ('269 file history); *see* Pl. Br. at 62.) The Federal Circuit has held that "Even if a claim term's

definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope." *Halliburton Energy Serv., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) (finding term "fragile gel" indefinite and rejecting construction that included, in part, a definition of "fragile gel" from the patent's specification). Such is the case here with the '255 patent's "definition" of "cell index."

Moreover, "cell index"/"cell index value" are coined terms, something the patentee confirmed during prosecution of the '080 patent when telling the Patent Office that "[a]pplicants have developed a value referred to as a cell index value." (D.I. 82-17 at AGILE0001100; Fair at ¶ 101.) And there is no evidence that "calculating cell index values" had any ordinary meaning to a POSITA when the patentee first filed the applications for the '752 and '080 patents. (*See* Fair at ¶¶ 100-101.) "Because coined terms have no 'ordinary and customary meaning' known to a POSA, the relevant inquiry is to examine the intrinsic evidence for 'objective boundaries to the scope of the term.'" *Jackson v. NuVasive, Inc.*, No. 21-53-RGA, 2023 WL 3721562, *6 (D. Del. May 30, 2023) (citing *Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1353 (Fed. Cir. 2019)). Indeed, the Federal Circuit has observed that the intrinsic evidence's importance is at its "zenith" in cases involving a "coined term." *IQASR LLC v. Wendt Corp.*, 825 F. App'x 900, 904-905 (Fed. Cir. 2020) (rejecting patent's "multiple layers of definitions" and finding term "magnetic fuzz" indefinite).

Here, although the '080 and '752 patent specifications include disclosure concerning cell index values, the patents fail to provide objective boundaries for "calculating cell index values," and the limitation is thus indefinite.

***The '080/'752 Specification*:** The specification dedicates a subsection, entitled "Methods for Calculating Cell Index," to the topic of calculating cell index values. ('752 at 24:56-38:67.)

There, the specification repeatedly emphasizes that there are "various," "several," and "different" methods for calculating cell index values. (*See id.*; Fair at ¶¶ 103-107.) After introducing the concept of "cell index" by noting that it is "possible" to derive "cell index" "from measured impedance frequency spectra," the specification states that: (i) "[v]arious methods for calculating such a cell number index can be used, some of which are novel methods disclosed herein[,]"; and (ii) "[t]he present invention provides several methods of calculating cell index numbers [and that for] preferred embodiments of the present invention, the methods calculate cell index number with better accuracy than previous methods of calculating cell index …." ('752 at 24:60-64, 25:9-20; *see also id.* at 24:64-25:8 (explaining that "cell index" is "the same as 'cell number index'" in a number of parent patent applications incorporated by reference), 25:47-48 ("The following discussion provides novel methods of calculating cell index …."), 27:13-17 ("[v]arious methods for calculating such a cell number index can be used …"), 30:32-37 ("there are different methods for calculating the parameter termed Cell Index or Cell Number Index …").)

The '080/'752 specification, in fact, describes seven specific methods for calculating cell index values, which it refers to as examples (A)-(G). ('752 at 27:41-30:20; Fair at ¶¶ 107-115.) While a common feature among the seven calculation methods is requiring the use of impedance measurements for the electrode array taken at multiple frequencies, the seven methods require significantly different calculations once those impedance measurements are in hand. (Fair at ¶ 117.) As Dr. Fair explains, the variations among these seven methods of calculating cell index values include that:

- Some calculation methods use resistance, while other calculation methods use reactance, while yet other calculation methods use magnitude of impedance (or both resistance and reactance);

- Some calculation methods require the use of ratios (*e.g.*, resistance ratios or reactance ratios), while other calculation methods use differences (*e.g.*, resistance difference or difference in impedance magnitude);

- Some calculation methods determine a peak value for a parameter from among the measured frequencies (*e.g.*, highest resistance ratio from among three resistance ratio values), while other calculation methods sum or integrate multiple values of the parameter together as part of the calculation;

- Some calculation methods result in cell index values with dimensions in Ohms, while other calculation methods produce cell index values that are unitless; and

- Some calculation methods require the resistances of the electrical traces from the connection pads to be included, while other calculation methods omit the electrical trace resistances.

(Fair at ¶¶ 118-122; '752 at 27:41-30:20, 38:18-33.)

The '080/'752 specification never defines "calculating cell index values" or its constituent terms, and, outside of the seven example methods, the specification does not provide any potential boundaries for the scope of "calculating cell index values." (Fair at ¶¶ 123-124.) In the only instances where the patent identifies the specific method of calculating cell index values used for the experimental results described in the patent's specification, the patent states that Example (A) was used. (*See, e.g.*, '752 at 47:15-48:35, 62:56-63:11 (same formula as described at 27:55); Fair at ¶ 123.) The specification does not indicate that any of the other six methods of calculating cell index values were used with respect to any of the experiments or figures discussed in the patent, nor does the specification suggest that the seven methods are interchangeable or equivalent to one another. (Fair at ¶ 123.) The specification lacks adequate guidance to reasonably inform the POSITA as to the scope of "calculating cell index values" in the '080/'752 claims. (Fair at ¶¶ 100-101, 124.)

Plaintiff touts the specification's seven "substantial non-exhaustive examples" as informing the POSITA of the scope of "cell index," citing *Geoscope Techs. Pte. Ltd. v. Google LLC*, No. 1:22-cv-01331-MSN-JFA, 2023 WL 4627433 (E.D. Va. July 19, 2023). (Pl. Br. at 62.)

But in *Geoscope*, the claim phrase that Plaintiff seizes on ("characterizing parameters") was part of a lengthy claim limitation that the court ultimately held had its "plain and ordinary meaning." *See Geoscope*, 2023 WL 4627433 at *10. Here, "calculating cell index values" has no plain and ordinary meaning; "cell index" is a coined term, as Plaintiff has conceded. Furthermore, Plaintiff's construction would encompass any and every calculation using even a single impedance value and is entirely untethered to the specification's seven, highly-specific example methods. (*See* Fair at ¶¶ 136-138, 152-154.)

***The '080 File History*:** Plaintiff also asserts that its construction "is supported by the prosecution history of related applications," but Plaintiff fails to mention the file history of the '080 patent itself, where the patentee added the limitation "calculating cell index values" to obtain allowance of patent's lone independent claim. (*See* Pl. Br. at 62; D.I. 82-17 at AGILE0001095, AGILE0001098-1105.) The patentee's arguments in the '080 file history only muddy things further. (*See* D.I. 82-17 at AGILE0001098-1105; Fair at ¶¶ 125-135.)

The patentee stated that the inventors "have developed a value referred to as a cell index value" and asserted that cell index values "themselves reveal important information" and "reveal[] information regarding status of the cell that is not readily apparent viewing raw impedance values." (D.I. 82-17 at AGILE0001100.) The patentee's argument then largely block-quoted several excerpts from the specification. (D.I. 82-17 at AGILE0001100-1102, AGILE0001105-1106; *see* Fair at ¶¶ 128-130.) In particular, these excerpts (i) note "it is possible to derive [cell index values] from the measured impedance frequency spectra"; (ii) explain for specification Example (A) what zero/near-zero versus higher cell index values indicate; and (iii) identify advantages of using cell index values as being able to, among other things, compare different electrode geometries and surface conditions. (D.I. 82-17 at AGILE0001101, AGILE0001105-1106 (citing specification

portions corresponding to '752 at 24:60-64, 28:1-11, 30:45-67); *see* Fair at ¶¶ 128-130.) Possibilities and purported advantages do not provide insight into objective boundaries for the scope of "calculating cell index values." (Fair at ¶ 131.)

In fact, the patentee tried to avoid stating anything definitive, instead emphasizing how cell index values are **not limited**. (*See* Fair at ¶¶ 132-135.) The patentee acknowledged that the Xiao et al. reference described determining a cell number that was correlated to resistance change, but argued that Xiao et al. did not show calculating cell index values because "the cell index value as established in the present invention **is not limited** to such a correlation." (D.I. 82-17 at AGILE0001105 (emphasis added); Fair at ¶¶ 132-133.) The patentee then, once again, extolled the virtue of using cell index values to compare electrode geometries and surface conditions, and concluded:

> Thus, while cell index value can also be used to provide cell number, Xiao et al.'s cell number is not shown as being useful for comparing the performance of various electrode geometries or surface treatments. Accordingly, the cell number as set forth in Xiao et al. is not a cell index value as set forth in the present invention. As such, Applicants respectfully request the rejections be withdrawn and the claims allowed.

(D.I. 82-17 at AGILE0001105-1106 (highlighting added); Fair at ¶ 134.) These statements do not help inform the POSITA, with reasonable certainty, about the scope of "calculating cell index values." (*See* Fair at ¶¶ 131, 135.) And Plaintiff's construction does not require cell index values to be shown to be useful for comparing electrode geometries and surface conditions, if one could even imagine how to go about doing that.

Finally, the relevant '080 file history is from 2011. (*See* D.I. 82-17 at AGILE0001108.) In its '080 prosecution arguments, the patentee could very easily have pointed to the "cell index" definition in the '255 patent on which Plaintiff now relies here, as the '255 patent issued years

earlier. The patentee did not do so. And a POSITA seeking to understand "calculating cell index values" in the '080 patent would not look to the '255 patent either, particularly where the patentee did not cite or rely on the '255 definition when explaining "cell index values" to the Patent Office during prosecution of the '080 patent. (Fair at ¶¶ 136-138; *see also id.* at ¶¶ 140-143 (addressing '752 claim 18).)

b. Term 8: "cell index" ('255 claim 9)

The '255 claims do not recite "calculating cell index values" (Term 7). Instead, independent claim 9 introduces "cell index" into the '255 claims by reciting "optionally determining a cell index …." ('255 at 99:42-43.) This "optional" limitation is Term 9 (addressed below). As Axion will explain, this optional limitation does not limit the scope of claim 9.

Putting that aside for the moment, "cell index" in the '255 patent claims is also indefinite. (*See* Fair at ¶¶ 146-156.) As noted above, the '255 specification includes the following disclosure.

> A "Cell Index" or "CI" is a parameter that can [*sic*] derived from measured impedance values and that can be used to reflect the change in impedance values. There are a number of methods to derive or calculate Cell Index.

('255 at 22:32-35.) Although present in the '255 patent (unlike the '080/'752 patents), this definition does not reasonably inform the POSITA of the scope of "determining a cell index" for reasons discussed above in Term 7 for "calculating cell index values." (*See* Fair at ¶¶ 148-151.) Furthermore, Plaintiff's construction of "cell index" tries to narrow the '255 definition, without explanation or justification. The '255 definition does nothing but vaguely indicate a relationship with impedance values without providing any meaningful guidance, and the definition is not remotely commensurate with the seven highly specific example methods disclosed for calculating cell index values (the same seven example methods disclosed in the '080/'752 specification). (Fair at ¶¶ 152-154.) A POSITA would not have been able to translate the '255 definition into a meaningfully precise claim scope for "cell index." (Fair at ¶¶ 152-156.)

3. Plaintiff's Reply Brief

In view of the specification, claims, and relevant prosecution history, a POSITA, would be able to ascertain the scope of Terms 7 and 8 with reasonable certainty and understand them to have Agilent's proposed meanings. Frazier ¶¶ 87, 92, 95, 96, 101, 108. Axion's arguments are unsupported and irrelevant.

First, Axion's argument that Agilent's proposed construction is not proper for the '752 and '080 Patents because it is derived from the '255 Patent, a continuation-in-part ("CIP") of an application that is a CIP of the '752 Patent is legally flawed. Ax. Br. at 63-64; *see also E.I. du Pont de Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1069-70 (Fed. Cir. 2019) ("This court's precedent supports treating the specification of [a related patent] as intrinsic evidence in construing claims in the [patent-in-suit] . . . because the subject matter is common . . . .") (internal quotation marks omitted); *Cree, Inc. v. SemiLEDs Corp.*, No. 10-866-RGA, 2012 U.S. Dist. LEXIS 39582, at *15 (D. Del. Mar. 21, 2012) (finding definition in related patent "especially persuasive" to disputed claim construction where the patent-in-suit "pertains to the same type of contact [under the disputed construction], within the context of the same technology, and was created only three years subsequent by some of the same inventors of the [patent-in-suit]").

Second, Axion asserts that Agilent's proposed construction is inconsistent with the '255 Patent's definition of "cell index," because it omits allegedly "ambiguous, permissive" language. Ax. Br. at 63. Not so. Agilent's proposed construction drops the language that cell index values "can be used" to reflect changes in impedance values because the claims actively recite calculating/determining a cell index. Moreover, Axion does not point anywhere else where the specification discloses a different or inconsistent definition of "cell index." Ax. Br. at 63. Instead, Axion notes that the '255 Patent specification describes multiple methods of calculating cell index (*id.* (citing Ex. 3, 22:34-35)), which, in no way, causes "cell index" to be indefinite.

Third, Axion's argument that the broad definition of cell index in the '255 Patent has "no boundaries" confuses breadth with definiteness. Ax. Br. at 63. "[A] parameter derived from measured impedance values that reflects a change in impedance values" would be understood by a POSITA. Frazier ¶¶ 92, 101, 112, 115. Axion's citation to prosecution of related patents (Ax. Br. at 63) fails; those statements, when put in context, support Agilent's proposed construction. *See* D.I. 82-8 at AGILE0060629 (patentee's response to office action); D.I. 82-9 at AGILE0063171 ("the cell index correlates the amount and viability of the cells within the particular experiment . . . it is possible to derive a so-called . . . cell index[] from the measured impedance frequency spectra."). Unlike the term that the Federal Circuit found indefinite in *Halliburton Energy*, 514 F.3d at 1254-1256, the disclosures in the specification are consistent with the '255 Patent's definition of "cell index." *See, e.g.*, Ex. 1, 30:35-37 ("Cell Index or Cell Number Index is a quantitative measure of cells in the wells under cell-substrate impedance measurement."); Ex. 3, 36:45-47 (same); Ex. 1, 24:57-64 ("Based on the dependent relationship between the measured impedance …, it is possible to derive a so-called 'cell number index' or 'cell index' from the measured impedance frequency spectra . . . ."); Ex. 3, 30:60-67 (same).

Fourth, Axion's argument that Asserted Patents disclose several methods for calculating cell index values, likewise, confuses breadth with definiteness. Ax. Br. at 64-66. The ample examples do not, as Axion suggests, render the claim indefinite. *See, e.g.*, *Guangdong Alison Hi-Tech Co. v. Int'l Trade Comm'n*, 936 F.3d 1353, 1363 (Fed. Cir. 2019) ("examples in the specification may be used to inform those skilled in the art of the scope of the invention with reasonable certainty—thus demonstrating that the term is not indefinite"); *see also* Frazier ¶¶ 93, 105, 112, 114. Rather, "a POSITA would have understood 'cell index' to be sufficiently clear and would understand how to calculate a cell index with reasonable certainty in light of the disclosures

in the patent specifications, either by choosing one of the disclosed examples of calculation or using experience and expertise in crafting a cell index calculation by using the measured impedance values." Frazier ¶ 95; *see also id.* ¶ 114.

Axion discounts *Geoscope Techs.*, arguing that the claim language there had plain and ordinary meaning, while "cell index" is "a coined term." Ax. Br. at 66-67. This argument misses the mark. Regardless of whether "cell index" is a "coined term," examples in the specification of how to calculate a "cell index" **support** definiteness of the term. *Geoscope Techs. Pte. Ltd. v. Google LLC*, No. 1:22-cv-01331-MSN-JFA, 2023 WL 4627433, at *10 (E.D. Va. July 19, 2023) (non-exhaustive list of embodiments, would allow a POSA to understand the scope of with reasonable certainty).

Fifth, Axion's argument regarding the patentee's argument in the prosecution history of the '080 Patent distinguishing the claimed "cell index" over the Xiao reference has nothing to do with indefiniteness. Briefly, the patentee argued that calculating cell index values as claimed is not the same as Xiao's observation that resistance changes correlate with cell number. D.I. 82-17 at AGILE0001104-AGILE0001106. Consistent with Agilent's proposed construction, Applicant clarified that "the present invention is not limited to such a correlation." *Id.* at AGILE0001105. This only shows that the patentee considered a correlation different from "a parameter derived from measured impedance values," and fails to have any bearing on whether a POSITA would understand the scope of the claim term with reasonable certainty. Frazier ¶ 109.

Sixth, the fact that the patentee did not point to the '255 Patent's definition of "cell index" during prosecution of the '080 Patent does not mean that a POSITA would not look to the '255 Patent. *See E.I. du Pont*, 921 F.3d at 1069-70; *Cree, Inc.*, 2012 U.S. Dist. LEXIS 39582, at *15. Regardless, a POSITA would understand the other disclosures common to the Asserted Patents to

be consistent with the '255 Patent's definition. Frazier ¶¶ 91, 106, 112.

4. Defendant's Sur-Reply Brief

a. Term 7

The authority Plaintiff raises at both the beginning and end of its reply does not support Plaintiff's reliance on the '255 definition to construe Term 7. Plaintiff misunderstands *E.I. du Pont de Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060 (Fed. Cir. 2019), which simply states that an earlier parent patent is intrinsic evidence in construing claims of a child CIP patent. *Id*. at 1069. That is the opposite of the situation here, where Plaintiff is using the later grandchild CIP '255 patent as evidence to construe Term 7 in the grandparent '752 patent (and '080 patent that shares the '752 specification). The '255 definition is not "subject matter common" to these patents, as *E.I. du Pont* references (at 1069), because the definition appears only in the CIP '255 patent.

Plaintiff's reliance on *Cree, Inc. v. SemiLEDs Corp.*, No. 10-866-RGA, 2012 U.S. Dist. LEXIS 39582 (D. Del. Mar. 21, 2012), is also misplaced as the court there was wading through a plethora of competing **extrinsic** evidence offered by the parties to support their respective constructions. *Id*. at *12-16.[25] In any event, the '255 definition tells a POSITA nothing about **calculating** cell index values, and Dr. Fair testified that a POSITA would not have looked to the grandchild CIP '255 patent in construing Term 7, a point that Dr. Frazier did not rebut. (*See* Fair at ¶¶ 138, 142; *see* Frazier at ¶ 110; Reply at 72-73.)

To be clear, Axion's position is not that Term 7 is indefinite merely because the '080/'752 specification discloses seven methods of calculating cell index values, or because of the breadth of Plaintiff's construction. (*See* Reply at 70-72.) "Calculating cell index values" is a coined term

[25] Extrinsic evidence also does not help Plaintiff's position here. Several co-inventors of the patents-in-suit published papers in late 2004 and 2005 describing calculating cell index values as being Example (A) from the '080/'752 specification disclosure, not using some amorphous "definition" like the '255 patent. (*See, e.g.*, Ex. 26 at 366; Ex. 27 at 797-98; Ex. 28 at 36-37.)

for which the intrinsic record (and Plaintiff's construction) provides no objective boundaries—*i.e.*, the term fails to inform, with reasonable certainty, the POSITA about the scope of the invention. That is why Term 7 is indefinite. (*See* Ax. Br. at 63-69; *see* also Frazier at ¶ 92 ("'cell index' is not a common term used in the art").)

Here, Plaintiff does not dispute that the seven disclosed methods vary widely. (Fair at ¶¶ 117-124; *see* Frazier at ¶¶ 103-106.) And even for the limited aspects common to the seven methods (*e.g.*, using impedance measurements for the array at multiple frequencies), Plaintiff's expert rejects that any such aspects are required for "calculating cell index values." (*See* Frazier at ¶¶ 103-104; *compare id*. at ¶ 90 (citing "impedance frequency spectra" disclosure).) In fact, Dr. Frazier goes even further, opining that a POSITA could use his own "experience and expertise in crafting a cell index calculation" or "to create a formula for calculating a cell index." (Frazier at ¶ 95; *see also* Reply at 71-72; Frazier at ¶ 114.) The Federal Circuit has repeatedly held, however, that "a claim term is indefinite if it leaves the skilled artisan to consult the unpredictable vagaries of any one person's opinion," which is precisely what Dr. Frazier is suggesting. *Dow Chemical*, 803 F.3d at 635 (cleaned up) (citing *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1374 (Fed. Cir. 2014)); *see also IQASR LLC v. Wendt Corp.*, 825 F. App'x 900, 907 (Fed. Cir. 2020).

Finally, the juxtaposition of Plaintiff's positions on Term 7 and Terms 1-3 is striking. In contrast to Terms 1-3, Plaintiff insists for Term 7 that the disclosed embodiments are non-limiting and pushes for a construction that is untethered to those disclosed embodiments. *Cf. Medicines Co. v. Mylan, Inc.*, 853 F.3d 1296, 1309 (Fed. Cir. 2017) (limiting "efficient mixing" to the specification's "non-limiting" Example 5 because it "provides a clear objective standard by which to measure the scope of the term" and "is necessary to tether the claims to what the specification indicates the inventor actually invented.") (cleaned up and citations omitted); *Indacon, Inc. v.*

Facebook, Inc., 824 F.3d 1352, 1357 (Fed. Cir. 2016) (terms with "no plain or established meaning to [a POSITA] … ordinarily cannot be construed broader than the disclosure in the specification") (citation omitted). Term 7 and Plaintiff's construction for it have no objective boundaries.

b. Term 8

Plaintiff does not directly address Axion's arguments for Term 8, choosing instead to address Terms 7 and 8 together to further its improper strategic objective of trying to import the CIP '255 patent's definition of "cell index" into the construction of Term 7 in the '080/'752 patent claims. For the reasons explained in Axion's answering brief, Term 8 is indefinite.

H. Term 9: "optionally determining a cell index from said cell impedance" ('255 Patent, claim 9)

Agilent's Proposed Construction	Axion's Proposed Construction
This step limits the scope of claim 9 and its dependent claims. It should be construed as "providing an option to determine and, if, elected, determining cell index from said cell impedance."	This step is optional and does not limit the scope of claim 9 and its dependent claims.

1. Plaintiff's Opening Brief

Agilent's construction clarifies how the inclusion of the word "optionally" affects the term in the context of the asserted claim. Axion contends that "optionally" makes the term non-limiting. But "optionally" as used here ***is*** limiting. Courts have construed terms that include the word "optionally" to be limiting. *See, e.g.*, *Certain Child Carriers, Components Thereof and Products Containing the Same*, 337-TA-1154, at *19-21 (ITC Nov. 21, 2019); *LBS Innovations LLC v. Aaron Bros.*, No. 2:11-CV-142, 2012 2012 WL 1492330, at *13 (E.D. Tex. Feb. 14, 2012). Contrary to the law, Axion's position asks the Court to eliminate two affirmative limitations of the claim and should thus be rejected.

a. The term "optionally" does not render the disputed term non-limiting.

The Patent Office has approved the use of "optionally" in claims. *See* MPEP § 2173.05

(citing *Ex parte Cordova*, 10 USPQ2d 1949 (Bd. Pat. App. & Inter. 1989) ("[T]he language 'containing A, B, and ***optionally*** C' was . . . acceptable alternative language because there was no ambiguity as to which alternatives are covered by the claim."). Courts have construed terms using "optionally" as limiting. *See, e.g.*, *Certain Child Carriers,* 337-TA-1154, at *19-21 (construing "configured for optionally coupling" as describing "a coupling which must be reversible"). The court came to this construction, in part, based on "[o]ther language" in the claim, which "describe[d] two alternative configurations, each with a specifically defined function, contingent on whether or not the upper-leg-support part [of the child carrier] is coupled to the hip belt." *Id*. at *14. Such is the case here, where the '255 Patent provides for two alternatives: (1) monitoring and comparing impedance of the test well to the control well, or (2) determining a cell index from impedance and comparing cell index of the test well to the control well. Ex. 3, 99:41-50.

b. Agilent's proposed construction clarifies the effect of "optionally."

Agilent's construction is consistent with the intrinsic record and clarifies that the claim requires an option to be available to determine the cell index by including the phrase "providing an option to determine and, if elected, determine" in the construction. In other words, if the ability to determine a cell index is not available, this limitation cannot be met. And conversely, if such option is provided, even if it is not exercised, this limitation is met. In the context of the '255 Patent, providing an option to determine the cell index is, as discussed above, "a parameter that can derived from measured impedance values and that can be used to reflect the change in impedance values." Ex. 3, 22:32-34; *see also id*., 48:1-12, 73:24-32, 75:59-67; § II.G.

The '255 Patent explains that measured impedance values ***can*** be used to derive a cell index, which provides "a useful index for quantitating and comparing cell behavior in the impedance-based assays of the present invention." Ex. 3, 30:60-67. If the phrase "optionally

determining a cell index from said cell impedance" were non-limiting, then there need not be an option for a user to derive and determine a cell index and all references in the '255 Patent to a cell index would be rendered meaningless. *Duhn Oil Tool, Inc. v. Cooper Cameron Corp.*, 474 F. Supp. 2d 1148, 1155 (E.D. Cal. 2007) ("A claim should not be construed in a manner that renders the claim language meaningless or superfluous.") (citing *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993)).

Thus, "optionally" is limiting and requires an option to determine the cell index from the cell impedance. Accordingly, consistent with the law and the intrinsic support, the term "optionally determining a cell index from said cell impedance" should be construed as "providing an option to determine and, if elected, determining cell index from said impedance."

2. Defendant's Answering Brief

The parties' dispute is simple—whether "optionally" means what it says. Claim 9 recites a multi-step "method of measuring cytolytic activity," including step d: "monitoring impedance of said control and said test wells before and after adding said effector cells and **optionally determining a cell index** from said impedance, …." ('255 at 99:32-50 (emphasis added).)

Optional steps do not limit the scope of the claim. *See In re Johnston*, 435 F.3d 1381, 1384 (Fed. Cir. 2006) ("As a matter of linguistic precision, optional elements do not narrow the claim because they can always be omitted."). Relying on *In re Johnston*, this Court previously analyzed a method claim with two optional steps (*e.g.*, one step recited "optionally the deoxygenation of the solution is completed by addition of an antioxidant"), finding that:

> [C]onsistent with the plain meaning of the term "optionally," the steps recited in these two clauses do not necessarily have to be performed in order to practice the claimed method. Because the step of adding an antioxidant is optional, it makes no difference when that step is performed. For purposes of claim scope, it is as if the optional step does not exist.

Cadence Pharm., Inc. v. Exela Pharma Sciences, LLC, No. 11-733-LPS, 2013 WL 11083853, *20

(D. Del. Nov. 14, 2013) (citations omitted), *aff'd*, 780 F.3d 1364, 1372-73 (Fed. Cir. 2015); *see also In re OxyContin Antitrust Litig.*, 994 F. Supp. 2d 367, 425 (S.D.N.Y. 2014) (attributes stated in claim as being "optionally" included "are not required limitations but merely optional features"); Manual of Patent Examining Procedure § 2111.04 ("Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed ….").

Plaintiff's authority ignores *In re Johnston* and is otherwise inapposite. For example, Plaintiff relies heavily on an ALJ decision in an ITC investigation, but the claim limitation there recited an "upper-leg-support part is configured for optionally coupling to the [] side of the hip belt"—in other words, the claim was directed to a structure required to be "configured" to provide a specific capability, not a method claim step. (*See* Pl. Br. at 75-76 (discussing *Certain Child Carriers*, Inv. No. 337-TA-1154, Order No. 34, at 14-16 (slip op.) (Nov. 21, 2019)).)

Plaintiff's construction replaces the word "optionally" with the phrase "providing an option to determine and, if elected, …." (Pl. Br. at 75.) But the claim language and specification do not support Plaintiff's rewrite. Claim 9 uses the same language that appears throughout the '255 specification, which repeatedly says "optionally determining a cell index." ('255 at Abstract, 6:38-40, 6:55-58, 7:7-10, 7:27-30, 7:47-50, 72:40-51, 79:29-32, 81:20-24, claim 1; *see also id*. at 48:1-3, 69:35-37, 73:24-32.) The '255 specification is in contrast to the grandparent '752 patent's disclosure, which only once explicitly mentions "optionally" calculating or determining a cell index. (*See* '752 at 45:37-40.) The patentee made a deliberate choice in the '255 patent to describe and claim the method step as "optionally determining a cell index."

During the less-than-rigorous examination of the '255 patent, the Patent Office did not address Term 9. (*See* D.I. 82-16 (lone substantive office action at AGILE0000654-656).) The Patent Office did, however, address claim language very similar to Term 9 during prosecution of

U.S. Patent No. 7,732,127, a child CIP of the '255 patent. (*See* D.I. 82-14 at AGILE0066024 (claim 24, step d reciting "determining the change in impedance and optionally a cell index (CI) of said test portion and the change in impedance and optionally a cell index (CI) of said control portion"); '127 at first page (field (63)), 65:8-11; *see also* Ex. 20.) In the '127 patent's prosecution, the patentee argued that the prior art failed to teach the claimed optional steps concerning a cell index. (*See, e.g.*, D.I. 82-14 at AGILE0066030-66031.) The Patent Office responded that "the optional steps of determining a cell index and its comparison … are not required by the claims and are optional," and further that the patentee's "arguments regarding the optional limitations have not been considered." (D.I. 82-15 at AGILE0066051; *see also id*. at AGILE0066054-66055.) In its next response, the patentee abandoned its arguments regarding the optional steps. (*See* D.I. 82-15 at AGILE0066062-66080.) The patentee's actions in prosecuting the '127 patent further confirm that Axion's position here is correct.

The Court should adopt Axion's proposal that Term 9 is an optional step that does not limit the claim.

3. Plaintiff's Reply Brief

Axion attempts to read Term 9 out altogether, while Agilent seek to give meaning to Term 9, consistent with the specification, by clarifying that it calls for an option to be available to determine the cell index. *See Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so."). Axion's quote from *In re Johnston*, which did not even involve interpretation of the term "optionally," is inapposite. Ax. Br. at 77-78. There is a difference between providing an option and a limitation being "non-limiting."

Axion also relies on *Cadence Pharm., Inc. v. Exela Pharma Sciences, LLC*, where the court stated that a party "cannot convert an optional claim step into a mandatory one by simply

performing that step." No. 11-733-LPS, 2013 U.S. Dist. LEXIS 166097, at *61 (D. Del. Nov. 14, 2013). On appeal, the court found performing the claimed "vacuum stoppering step is optional and not mandatory" because of the preceding "optionally" term. *Cadence Pharms., Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1373 (Fed. Cir. 2015). However, importantly, Agilent does not propose that "optionally determining a cell index from said cell impedance" means that a cell index must be determined from cell impedance. Rather, Agilent proposes that *the option to do so* must be provided. The same is true for *In re OxyContin Antitrust Litig.*, which held that inclusion of ingredients preceded by the word "optionally" were "optional features" and not "required." 994 F. Supp. 2d 367, 425 (S.D.N.Y. 2014). Again, Agilent does not propose that the determination of cell index is required, only the option to calculate a cell index.

Agilent's position is supported by cases where courts have interpreted method claims employing the word "optionally" to mean that an option must be provided to perform the steps following the word "optionally." For example, the court in *LBS Innovations LLC v. Aaron Bros.* construed the term "**optionally executably selected** by said user to provide additional of said situation information" in a method claim as "displayed **in a manner that permits the user to select** the item so as to provide additional situation information about the item." No. 2:11-CV-142, 2012 U.S. Dist. LEXIS 189544, at *38-40 (E.D. Tex. Feb. 14, 2012). *See also Imprenta Servs. v. Karll*, No. CV 20-6177-GW-PVCx, 2021 U.S. Dist. LEXIS 174877, at *12 (C.D. Cal. Sep. 13, 2021) (construing the phrase "configured to *optionally* move among first and second positions" means that "'at least a portion of the top of the outer [metal] cap' *is capable* of moving between the two positions should the user choose to do so").

4. Defendant's Sur-Reply Brief

Plaintiff seeks to rewrite Term 9. But, again, "[c]ourts do not rewrite claims; instead, we give effect to the terms chosen by the patentee." *K-2 Corp.*, 191 F.3d at 1364. Here, the effect of

choosing to claim the method step of "optionally determining a cell index …" is unmistakable; the step is optional and does not limit the claim. (*See* Ax. Br. at 77-79.) Term 9 does not say "providing an option …." In fact, the very first step of claim 9 recites "**providing** a device capable of …," indicating that the patentee knew how to claim a method step of "providing [something]" when it wanted to do so. ('255 at 99:32-33 (emphasis added).)

Plaintiff tries to distinguish the legal authority Axion cites by arguing that Plaintiff "does not propose that the determination of cell index is required, only the option to calculate a cell index." (Reply at 80.) But Plaintiff's attempted rewrite **affirmatively requires** one to "provid[e] an option to determine …," where the claim recites no such thing, and narrows the claim significantly—something Plaintiff no doubt wants given the broad, generic method steps recited in the '255 patent's claim 9. Plaintiff's construction lacks any intrinsic record support, and its newly cited authority cannot salvage its construction. Just like the ITC decision Plaintiff cited in its opening brief, the claim limitation at issue in *Imprenta Servs. v. Karll*, No. 20-6177-GW-PVCx, 2021 U.S. Dist. LEXIS 174877, at *3-4, *12 (C.D. Cal. Sept. 13, 2021), is directed to a structure (a "child resistant container" with "the top of the outer cap") required to be "configured" to provide a specific capability; the *Imprenta* claim is not a method claim step.[26]

[26] Axion already noted that *LBS Innovations LLC v. Aaron Bros.*, No. 2:11-CV-142, 2012 U.S. Dist. LEXIS 189544 (E.D. Tex. Feb. 14, 2012), did not consider the relevant Federal Circuit authority in *In re Johnston*, 435 F.3d 1381 (Fed. Cir. 2006). Also, the limitation at issue in *LBS Innovations* recites a functional capability of "mappable hypertext items," not a method claim step. *See LBS Innovations*, 2012 U.S. Dist. LEXIS 189544 at *38-40.

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